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Final Report Grande Cache Commission.

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FINAL REPORT

GRANDE CACHE COMMISSION

N.R. Crump

Alberta
GRANDE CACHE COMMISSION

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FINAL REPORT

The Development of the Alberta Economy

The Alberta Economy

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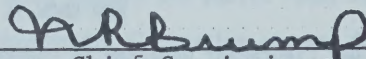
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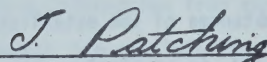
HIS HONOUR THE LIEUTENANT GOVERNOR IN COUNCIL

We, the undersigned, N. R. Crump, T. H. Patching,
D. Graham, appointed Commissioners under Order-in-Council 290/73
beg to submit the following report. This is an unanimous report
subject only to the 3 reservations Commissioner Patching expresses
in his minority report which follows our conclusions and recommendations.

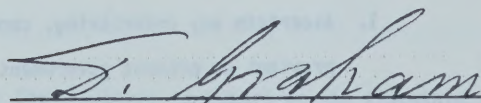
DATED at the City of Edmonton, in the Province of
Alberta, this 30th day of November, A.D. 1973.



Chief Commissioner

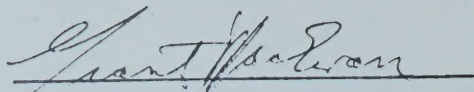


Commissioner



Commissioner




Lieutenant Governor

ELIZABETH THE SECOND, by the Grace of
God, of the United Kingdom, Canada
and Her other Realms and Territories,
QUEEN, Head of the Commonwealth,
Defender of the Faith

COMMISSION

To all to Whom these presents shall
come, or Whom the same may in anywise
concern,

CANADA

GREETING . . .

PROVINCE OF ALBERTA

WHEREAS section 2 of The Public Inquiries Act provides that
the Lieutenant Governor in Council may cause an inquiry to be made into any
matter within the jurisdiction of the Legislature of Alberta; and

WHEREAS it is expedient and in the public interest that a
public inquiry be made into the various issues that affect the present and
future economic and social situation of The New Town of Grande Cache:

NOW KNOW YE that by and with the advice and consent of
Our Lieutenant Governor in Council, We do by these presents nominate, constitute
and appoint N.R. Crump, Thomas Herbert Patching and David Graham as Commissioners,
with N. R. Crump as Chief Commissioner, to make an inquiry into the history and
circumstances of the establishment and development of The New Town of Grande
Cache and, in particular, to

1. ascertain any undertaking, commitment or representation given by the
previous or present government administrations to any company, group,
association or person which could involve a continuing responsibility
for public funds upon the Alberta Government;

2. determine the extent of the representations or undertakings made by McIntyre Porcupine Mines Ltd. to any employee or group of employees as to long term employment security or any other representations or undertakings made by the company, either to employees, to the citizens of the community or to the Government;
3. determine the economic viability of the operation of McIntyre Porcupine Mines Ltd. and of the community itself, and make recommendations as to steps which could be taken to strengthen such economic viability, including a review of the pricing provisions of contracts for the sale of coal, the cost of production and a review of the reports supporting management's decision to make major changes in policies affecting production;
4. review as soon as possible, the application of McIntyre Porcupine Mines Ltd. presently before the Energy Resources Conservation Board to open No. 9 mine and present an interim report on a recommended course of action regarding No. 9 mine;
5. review the actions taken to date by both the previous and present government administrations in providing support and public funds for this community and to recommend to the Government alternative courses for future government policy and programs for this community;

and for these purposes to consult with or procure information from any organization, individual or group of persons, and to accept for consideration any submissions or other representations made by or on behalf of interested persons or organizations; and

WE DO DIRECT Our Commissioners to report on the aforesaid matters to Our Lieutenant Governor in Council; and

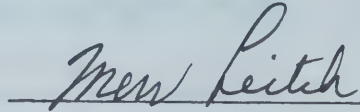
WE DO DECLARE the matters referred to Our Commissioners
to be matters of Public Concern:

IN TESTIMONY WHEREOF WE have caused these Our Letters
to be made Patent and the Great Seal of Our Province of Alberta to be hereunto
affixed.

WITNESS: The Honourable J. W. GRANT MacEWAN, Lieutenant
Governor of Our Province of Alberta, in Our City of Edmonton, in Our Province
of Alberta, this 14th day of March in the Year of Our Lord, One Thousand Nine
Hundred and Seventy-three and in the Twenty-second Year of Our Reign.

BY COMMAND:


D.A.G.


Provincial Secretary

PART III: Introduction

Your Commissioners determined that the discharge of their responsibilities under the Order-in-Council and The Public Inquiries Act dictated the holding of public hearings. Public hearings were held in both Grande Cache and Edmonton. Notice of the hearings was given to the public and to persons the Commissioners felt would be interested. The advertised initial hearings were adjourned to accommodate a change in Counsel for the Company. Your Commissioners took 1,800 pages of testimony from 64 witnesses. A copy of the notice of hearing, a list of newspapers in which it appeared and a list of witnesses and exhibits are provided as Appendix 1.

At a very early stage in our investigations, it became apparent that a full review of the application to open the Number 9 Mine referred to in paragraph 4 of the terms of reference could not be undertaken without more extensive investigation and inquiry than time permitted as the application was already before the Energy Resources Conservation Board. There appeared to be urgency in considering the application so your Commissioners therefore deleted paragraph 4 from the published notices. Your Commissioners advised the Energy Resources Conservation Board and the government on March 20, 1973, that the circumstances appeared to dictate the necessity of this application being proceeded with expeditiously. The Energy Resources Conservation Board hearings were scheduled for April 3, 1973. (Our letter is Appendix 2). Our subsequent investigations confirmed that this

interim decision was necessary in the circumstances. Certain comments respecting the Number 9 Mine area referred to in paragraph 4 of the Order-in-Council appear in this report, but these do not call into question the permits or authorities which have been granted respecting that mine area.

Your Commissioners also decided that paragraph 3 of the terms of reference must be construed as referring to the economic viability of the coal mining operations of McIntyre Porcupine Mines Ltd. as distinct from the viability of the corporation itself unless there were grounds for deciding that the coal mining operations would be adversely affected by the Company's other operations. In this report, McIntyre Porcupine Mines Ltd. is referred to as the Company.

Having decided these two preliminary matters, your Commissioners attempted to secure the information and advice of all persons who might be interested in the matters raised in the terms of reference and invited these persons to make submissions to the Commission. Your Commissioners also obtained the evidence of witnesses whose testimony was relevant to our inquiry and, where necessary, subpoenas to attend were issued. The Company was invited to make submissions to the Commission and was requested to put at the disposal of the Commission all relevant documentary evidence and to make available to the Commission any employees or former employees whose evidence would assist the inquiries. The Company did make its documents freely available and did arrange for the attendance of those persons whose attendance it could secure. It was apparent that all relevant government documents and testimony was similarly

necessary. Your Commissioners established an office and were provided with a support staff co-opted from the provincial government service. The staff, among other duties, assisted in the examination of the documentary material and in securing information from the government and the Company.

The Commissioners also felt it advisable, indeed necessary, to secure expert assistance in undertaking its investigations. To that end, four experts were retained. These were: Dr. Eric J. Hanson of Edmonton, an expert economist, to advise on municipal economics; Mr. Kenneth Wardell of Newcastle, England, an expert mining engineer, to advise on underground mining operations; Mr. John T. Boyd of Pittsburgh, Pennsylvania, also an expert mining engineer, to advise on surface mining operations; and Mr. David C. H. Stanley of Toronto, an expert financial analyst, to advise on the economic viability of the Company's coal operations. In keeping with the principle that the evidence upon which the Commission acted should be made public and subject to scrutiny by those whose interest might be affected, each of these persons was called an expert witness.

The Commission called before it four former members of the Executive Council of this province. The Commissioners consider it important to record the position that was taken with respect to these witnesses. They were called as witnesses as to facts and advised that they would not be expected to reveal communications that took place in meetings of the Executive Council or intra-governmental communications.

These witnesses were also advised that they would not be expected to comment upon government policy but were free to do so.

Any person wishing to be represented by Counsel was accorded that privilege. A list of counsel who appeared at the hearings is attached as Appendix 3. It may be noted that the Company was represented throughout the hearings.

Parts IV to VIII of this report are a narrative of findings we made in carrying out an investigation under the Order-in-Council. The analysis and findings contained in these sections represent our answers to the questions raised in the terms of reference. The more important of these findings are repeated in Part IX which includes our recommendations.

PART IV: The Development

The Development of the Coal Field and the Town
(Prior to the Alberta Resources Railway)

The Company, or its predecessor in title, has held the majority of its coal leases for many years. Those leases have long been known to embrace substantial quantities of coking coal which is much more valuable than coal used solely for thermal purposes.

The history of the coal development with which we are concerned can be taken as starting in the early 1960's when an exploration program was undertaken for the U.S. Steel Corporation by Dr. K. K. Landes. U.S. Steel, which had the right to acquire certain interests in the leases under its arrangement with the Company, decided not to proceed with a program. The Company, following this study which showed large amounts of coal to be present, decided to investigate the possibility of its undertaking the development.

The Company, prior to 1963, had not engaged in coal mining operations, and it is apparent that its long history and expertise in mining of other resources was of limited value in assessing or undertaking coal mining operations, whether those be underground or surface mining of coal. The Company did not have as employees, officers or directors, persons of expertise in coal mining or coal marketing. It therefore relied in the early stages of the coal development to the greatest extent upon a number of outside consultants retained to advise on various aspects of the

feasibility of developing these leases.

It should be pointed out that the presence of the coal was capable of geological proof and measurement. The leases held large quantities of coal which was capable of measurement, sometimes referred to as *in place* reserves. While exploitation of these *in place* reserves depended upon many factors, it essentially depended upon the existence of economically recoverable reserves, that is reserves which can be mined at a cost which will enable an adequate return on the investment necessary to carry out the operation. In determining economically recoverable reserves, those reserves lost in winning the physically recoverable coal are excluded, as well as those reserves which cannot be mined economically having regard to current costs of mining.

Definitive feasibility studies as distinct from geological studies were not completed until after the announcement of the Alberta Resources Railway.

The Alberta Resources Railway

One important requirement for developing the coal field was a railway. No other means of transport had been considered as feasible for the movement of coal to shipping points or to the existing main line of the Canadian National Railways, in this report referred to as the C.N.R. Landes had, on behalf of U.S. Steel Corporation, made an approach to the C.N.R. to determine the terms upon which rail service could be provided.

The C.N.R. indicated the need for a guaranteed tonnage in terms of quantity and years before it would undertake construction. These discussions were of a very preliminary nature.

The Company, when itself investigating the feasibility of developing its coal leases, again approached the C.N.R. and was again advised of the necessity for a guaranteed tonnage. This requirement was indicated to be in the order of 15 years at 1 1/2 million tons per year. A freight rate of approximately \$5.50 per short ton to Vancouver was quoted by the C.N.R.

The Company's interest in the provision of rail services coincided with the interest of the Alberta Government in providing a rail connection between the Grande Prairie area and the C.N.R. main line in the Hinton-Jasper vicinity. The possibility of such a project had been mooted for many years. It is clear that the interest of the Company in having part of this line constructed was known to the provincial government, both directly and through the C.N.R. The discussions about a proposed railway were, however, mainly between the C.N.R. and the Government of Alberta. It is clear that no commitment was obtained by the province or the C.N.R. from the Company before the decision to build the railway was publicly announced. In a letter to the then Premier, the Honourable Senator E.C. Manning, the then President of the C.N.R. pointed out that an announcement of the proposed railway, serving the coal area then under discussion by the Company, would preclude the obtaining of a guaranteed tonnage contract from the developers of the coal.

The provincial government had, however, decided that it was in the best interests of the province to promote and provide this railway facility. It felt that without the railway, the coal developers, or other mineral developers, could not achieve long term contracts. It was a question of which came first: "the chicken or the egg", and the government decided that the railway would have to precede development. The government made the decision to finance the construction of the Alberta Resources Railway, in this report referred to as the A.R.R. There can be no doubt that from the information the government had as to the projected coal development, both from the Company and the C.N.R., that substantial revenues from coal were anticipated. The government did not undertake any investigation of the feasibility of the Company's plan for the coal development. It is doubtful that the C.N.R. undertook any such investigation. All parties were optimistic about the project and there was certainty in the minds of all the parties that a large scale coal operation would develop, with production running to several million tons per year.

Whether or not the provincial government should have obtained a contract or commitment from the Company is beyond our terms of reference. It is clear that the government did not require assurance that the proposed A.R.R. would be economically viable, and its economic viability, while desired and anticipated, was not the primary criterion for its construction. We have concluded that the Company did not make any commitment or representation in connection with the government decision to proceed with the A.R.R.

An agreement was reached under which the government would finance

and the C.N.R. would construct and operate the railway, and the government would receive part of the revenue. Under the actual agreement between the A.R.R. and the C.N.R., it was provided that the provincial government would be paid a "rental" for traffic moving over the railway. Under the terms of that agreement, the rate to be paid to the province was \$1.40 per ton for coal. It was apparently expected that the rates provided for in the agreement would ultimately enable the province to recover its capital costs. The rates were apparently suggested by the C.N.R. There is no evidence of there having been any negotiation of these rates between the government or the A.R.R. and the C.N.R. It should be pointed out that while the contract was between the C.N.R. and the A.R.R., and the latter had its own Board of Directors, the A.R.R. - C.N.R. decisions which concern us were all made by the Provincial Cabinet on behalf of the A.R.R.

The Company did not know that the C.N.R. and the government were talking in terms of the government's providing funding for the railway. The Company was not a party to negotiations between the government and the C.N.R. The announcement of the A.R.R. in the Legislature on February 18, 1965, was unexpected by the Company. That announcement was a commitment by the government which assured that rail service would be available to move the coal and the Company's difficulty in providing its coal developments with the need for a guarantee to ensure the necessary rail service disappeared. It only then became a matter of negotiating the price for haulage.

All of the discussions by the Company in regard to rates were with the C.N.R. Prior to the announcement of the A.R.R., no firm rates had been quoted by the C.N.R. to the Company, although discussions had

indicated figures in the order of \$5.50. After the announcement of the A.R.R., the Company began to negotiate a firm rate. The C.N.R. quoted a rate of \$4.45 per short ton during 1965. The A.R.R. would receive \$1.40 of this amount.

In early 1966, the Company negotiated a contract with the C.N.R. It was anxious to fix this rate so it could carry on negotiations with its buyers who were then talking with the Company in terms of a 15 year contract of between 1 and 2 million tons per year. The Company did not know what the arrangements were between the C.N.R. and the A.R.R., although it did understand that the province would have to be consulted regarding the rate. The Company made calculations of freight costs through experts it had retained and told the C.N.R. that the maximum it could pay and ensure that the coal traffic would move was \$3.13 per short ton. This would, in the Company's view, make its price competitive. There is no record of the precise terms that were being discussed with the proposed Japanese buyers at this time, but it may be noted that the Company was basing its estimates on a return of 12% on a discounted cash flow. It may also be noted that the Japanese buyers were talking in terms of "cost plus a reasonable rate of return", but there is no evidence that the Japanese had any part in or knowledge of the Company - C.N.R. discussions or the C.N.R. - A.R.R. discussions. The Company indicated to the C.N.R. that even at the \$3.13 rate its return would be minimal.

On the basis of the representation that the maximum it could pay and ensure that traffic could move was \$3.13 per short ton, the accuracy of which can neither be confirmed or denied at this point, the C.N.R. in March,

1966, approached the Alberta Government and advised that the coal would not be marketed unless a lower rate were provided and the C.N.R. could not reduce its share any lower. To ensure that the traffic would move, the A.R.R. would have to reduce its rate from \$1.40 per ton to \$0.50 per ton. The C.N.R. had technical advice available from its staff and we can only assume that their technical experts did not question the statement that the coal would not otherwise move. The Alberta Government did not investigate the validity of the Company's position and accepted the reduction. The C.N.R. - A.R.R. agreement was not formally amended. A firm contract was signed in April, 1970, in accordance with these negotiations for a basic price of \$3.13 per short ton or \$3.69 if the C.N.R. supplied the cars. This contract provides for a penalty of \$0.64 per short ton for all tonnage below 1,915,000 per annum. No part of this penalty goes to the A.R.R.

On a 15 year, 29.5 million ton contract, this reduction amounted to over \$26.5 million. This reduction, assuming the original \$1.40 rate was a proper one, can only be characterized as a subsidy -- to the purchasers of the coal if they were truly buying on a "cost plus" basis; to the Company otherwise.

A second arrangement with the C.N.R. was negotiated for a further 3.3 million tons. In this case, the railway was convinced that the coal could not move without a special rate, and the government reluctantly accepted the proposal, this time at a rate of \$0.60 per ton to the A.R.R. This appears to relate to a proposal for sales from the Number 9 Mine, a proposal which had fallen through and it appears to us that the \$1.40 A.R.R. rental

rate would be applicable to all other coal movements for the Company over the A.R.R.

The terms of the government's agreement with respect to the rate appear to be a waiver of \$0.90 for the contract under negotiation in 1966. That contract, concluded in 1968-1969, has, as of this year been terminated. Your Commissioners will make recommendations in this regard.

The Negotiation of the
Japanese Coal Sales Contract

In the spring of 1964, the Company began discussions with prospective coal purchasers in Japan, and Mitsubishi Mining undertook an investigation reporting favourably on the coal quality and providing some estimates of tonnages. In 1965, the Company instructed consultants, the Paul Weir Company of Chicago, to undertake a study of the economic feasibility of establishing a commercial coal mining operation in the Smoky River area. This report was received in December of 1965, and it indicated that adequate tonnage for a commercial development was available. This study was based on hand mining methods. It noted that deep, steeply pitched, faulted seams may prove to be very difficult to mine economically and accordingly certain reservations appeared in this study. No consideration was given to any mining method other than underground mining.

In 1967, the same consultants undertook further studies. A suggestion that the Japanese buyers would be interested in 2 million tons per year over 15 years was now under consideration. This report indicated

20.3 million long clean tons available, sufficient to maintain 2 million long clean tons per annum for a period of 8 to 10 years. In this study, the ability to supply "saleable" coal was the key consideration. Accordingly, the studies had to consider what coal was economically recoverable, and from that what would be lost in "washing" or cleaning the coal to meet the demands of the buyers for suitable coking coal.

Further necessary exploratory investigations were undertaken and the Company conducted its own internal feasibility studies. Such a report dated 9th July, 1968, was presumably available for the final negotiations with the buyers, since a letter of intent was signed in that month. This report noted the existence of immense reserves almost certainly sufficient to fill any size of sales contract which might be contemplated. By this time, it was clear that highly mechanized means of working the coal would have to be utilized and that the technological problems of mining the steeply pitching seams at an economic rate were still to be met. It should be noted that none of these studies to this time placed any reliance on the availability of coal from surface or open pit mining.

Contract negotiations were extended over several years, until finally in August, 1968, a letter of intent was signed. This was followed by a contract that was signed in January, 1969, for the sale of 29.5 million long tons of clean coal over a 15 year period (1.5 million tons in the first year and 2 million tons per year thereafter) for a price of \$13.90 (U.S.) F.O.B. Vancouver. Certain penalty and escalation clauses were included in the contract. Deliveries were to begin in 1970. This was the top price then being paid in Canada for metallurgical coal. Both the Company and the

buyers apparently thought this allowed a reasonable rate of return to the Company, having regard to the projected costs.

A detailed analysis of the various studies was presented to the Commission by the expert K. Wardell (his report is Exhibit 43). His conclusion was that since some of the geological and virtually all of the underground physical conditions, as well as the labour prospects, were virtually unknown, highly favourable outcomes for nearly all the variables would have had to be realized to justify the contract which was in fact negotiated. Those variables included the physical conditions, the labour availability and the operation of mechanical mining equipment. The project, needing highly efficient mechanical mining, was heavily based on a mechanized "longwall" method of mining; a method not necessarily suitable for the conditions. A proposed pilot project which would have tested some of the conditions was not carried out. Operating management had not been hired by the Company when the commitment to the buyer was made.

Mr. Wardell gave evidence to your Commission with the admitted benefit of hindsight. The evidence available at the time should however, have indicated that the contract was fraught with danger from the outset. There is certainly no suggestion of bad faith on the part of the Company nor any unwillingness to invest necessary funds. The risks were apparently not foreseen or given sufficient weight. A delayed or smaller initial commitment would have provided the opportunity to do more exploration and development work. We are satisfied from the evidence of Mr. Wardell and the Company that the desire to conclude a contract for a large initial contract, coupled with the undue conviction that technical problems could be overcome as

they arose, outweighed prudence.

The Leases

The Company held 21,446 acres of coal under 21 year leases which had been renewed in January, 1956. They were subsequently transferred to a subsidiary, McIntyre Coal Mines Limited, and then re-transferred to the Company. These leases expire in 1977 and may be renewed on such terms as may be approved by the Lieutenant Governor in Council. It is clear that McIntyre Coal Mines Limited never functioned separately but it performed, for a time, as a division of the Company. We refer to the Company throughout as the subsidiary's involvement was of short duration, and it was, to all intents and purposes, an arm or division of the Company.

Additional parcels of 7,410 acres were granted to the Company in January of 1964, to extend reserves and facilitate access. These are also for 21 years. A similar grant was made in early 1966 of 865 acres. In May, 1966, three mine leases of 4,632 acres were granted to the Company; again to provide a continuity. These leases were not offered for public sale.

In September of 1968, leases 6599 - 6613, totalling 34,536 acres, were granted to the Company. At this time, the Company indicated it was considering a contract of up to 3 million tons a year as against 1 1/2 million tons previously considered. These leases were granted because they appeared vital to the consummation of a coal contract. They were subject to the following special provision: "Notwithstanding any of the other provisions

of this lease, if on or before December 31, 1969, the lessee fails to submit evidence that it has entered into a coal sales contract satisfactory to the Minister, the Minister may cancel . . .". In October of 1969, the Company confirmed its 29.5 million ton 15 year contract, and the clause was cancelled. That contract has, as of this year, been abrogated.

The leasing patterns are developed in Exhibit 19. These last leases include what is the proposed Number 14 Mine area.

No special payments were made for any of these leases other than normal rental. The government did give prompt and favourable consideration to the Company's requests and it is clear that the government was anxious to have a concluded contract. There were no unfulfilled representations and commitments by either side.

In 1969, a public sale of coal prospecting permits was made and the Company acquired a permit for \$102,752. This ultimately resulted in a further 20,480 acres being leased to the Company in January of 1971 after it had conducted some exploratory activities under permit.

The government receives \$1.00 per acre per year rental over the value of royalty. The Company now holds about 90,000 acres.

The provincial royalty under S.78 of The Mines and Minerals Act is \$0.10 per short ton. That royalty is charged and collected on the shipment of the coal.

The New Town of Grande Cache

After the announcement of the railway, and while negotiating with the Japanese buyers, the Company also had to start planning for the development of a minesite and a townsite.

The provincial government's new town legislation appeared to the government and the Company as ideally suited for a resource town. It had been used before. Both the Company and the government were anxious to avoid a "company town" or anything less than a well designed new community. The Company had to attract employees. It contemplated encouraging and promoting home ownership. It indicated the need for a hospital and a recreation centre, to both of which it was prepared to contribute capital funds.

In 1966, the province began steps towards establishing the Town. The province saw the need for a permanent settlement as "relatively urgent". The province also saw the need for a road to serve the townsite. Service by the road to the railway was incidental having regard to the fact that the railway had been started in 1965, scheduled for completion in October of 1967, while the road was to reach "graded" state to the Town that year. The Provincial Planning Board initiated a study in 1966. It noted that other resources might be developed after the Town was established. It is clear, however, that planning for the Town was based on the coal mine and its attendant services, including a power plant facility.

The report prepared by the Provincial Planning Board (August,

1966) noted that the Company had indicated that approximately 180 million tons of coal "may be reasonably extractable". The report assumed a town with a work force of 925 people in 1972: 700 in mining, 40 in the power plant (which contemplated the use of reject coal) and 185 in the service of the other two. The projection gave a population estimate of approximately 4,000, perhaps 5,000 in 1973. Basic plans were predicated on an ultimate population in the order of 5,000 persons.

A new town was duly incorporated, but no significant expenditures were made until the Company confirmed its long term coal contract in late 1968. The initial planning was for a population of 4,000, based on a mining operation with 700 employees. The figure of 700 to 800 employees was a "firm" figure in the minds of the Company and the government. No attempt was made to obtain any legally binding commitment from the Company to the province as to the number of employees, but it is clear that the Company knew the province was planning on the basis of its estimates and a figure of 700-800 employees was being relied upon.

The cost of establishing the Town was advanced by the province to the administrator of the new Town. School construction costs were advanced through the Department of Education. Figures are provided in Part VIII of this report.

The Company had originally planned to pay the entire cost of the recreation centre, but later reduced its contribution to a fixed sum of \$375,000. The Town knew of the decision when it decided, nonetheless to build a more expensive recreation centre out of its own funds. The Town

also undertook to operate that centre. Hospital funds were provided by the Alberta Hospital Services Commission. The Company promised a contribution of \$250,000.00, and that was made. The province proceeded with highway construction. The province provided the highway into the Town; this necessitated considerable new grade and that road was also used, in its early stage, to assist the construction of the Alberta Resources Railway. The province undertook the road construction and planned completion as we have mentioned to the graded stage in 1967. The road beyond the bridge over the Smoky River to the minesite was built by the government but paid for by the Company. The road was necessary for the mine construction.

One other factor may be noted. The province's initial planning was predicated on the basis of a population of approximately 4,000. That has been known to the Board of Administrators (initially themselves provincial employees), and the community. The province was optimistic about the development and the 4,000-5,000 population figure was publicized. We are of the view that while some of the businessmen relied on these figures there cannot be said to have been any assurance given to them and the business community must run the risk of a decline, just as it would reap the benefits of a burgeoning population. Other residents are, however, in a different position in that they do not speculate, and they can and do expect that a planned community will be economically self-sufficient: i.e. planned to live within its budget. The ordinary resident does not anticipate major fluctuations of populations.

Recruiting of Manpower

The projected coal operation required bringing to the community a large labour force. Virtually none of the required skills could be found in Alberta. The Company decided to recruit skilled personnel in other mining areas, notably the United Kingdom and the Maritimes and to undertake, with government assistance, a program of job training to utilize unskilled labour recruited in Alberta.

Recruitment abroad dictated a policy of providing inducements to men and their families to give up their existing way of life in exchange for life in a new, in many respects frontier, community. The Company's policies appeared fair and generous. Employees were brought on the promises of assistance for travel, assistance for home ownership, and good long term prospects. Your Commissioners have examined the evidence carefully and are satisfied that the Company can, with two exceptions, be fairly said to have lived up to its commitments.

Those exceptions are important. Firstly, there is a machinery under which an employee can resell his home bought through the Company back to the Company. In fact, the residence obligation is vested in Smoky River Investments, a Company subsidiary which does not have sufficient assets to ensure that this agreement can be carried out. We do not suggest the use of the subsidiary as designed to achieve this end. The second problem relates to the duration of employment. The Company recruiters told employees it had a 15 year contract. This was true at the time although it no longer is. We do not believe, on the evidence before us, that the 15 year contract terms

were incorporated into contracts of employment of the miners although there may be cases where it was. An employee does run some risk of his employment being terminated because of lack of success of his employer's ventures. This is a risk he runs. On the other hand, many of those recruited by the Company were affected by the optimism that the Company felt, and we are obliged to say that it was represented to employees that the Company intended to carry out its 15 year contract with its Japanese buyers, necessitating the continuing of employment of staff for the mines, based on underground mining operations. As an indication of the extent of foreign recruitment and its fate, of the approximately 200 miners mostly with their families who were brought from the United Kingdom through Canada Manpower, 102 were still employed in December, 1972, and 67 after February, 1973.

Alberta Power

The proposed coal development had, from at least 1966, contemplated the integration of a power plant facility to employ reject coal or middlings.

The Company decided that the construction of a power facility would serve three interests:

- (1) It would use, and reduce, reject coal, thus helping to obviate the necessity of disposing of large quantities of waste coal;
- (2) It would provide some revenue;
- (3) It would ensure a stable power supply.

An agreement was negotiated with Alberta Power Ltd. The company's view was that an expensive plant would be necessary and that the price for the reject coal product would have to be sufficiently low to justify building at Grande Cache, rather than its adding another unit to its plant, fired by thermal coal, at Forestburg. A price was negotiated accordingly. It is a very low price based on energy values, now about \$0.30 per ton. On the basis that it would be producing 2 million tons of clean coal annually, the Company projected the availability of at least 1/2 million tons of reject coal, and it committed itself to provide this coal for the 15 year life of the Japanese contract, with an option to Alberta Power to take another 15 years of this coal.

No provincial royalty has been paid or demanded on this product. The Company classed the material as reject or waste. The Alberta Power Ltd. plant is a major plant of 150,000 kilowatts capacity. It supplies the mine and Plains Western Electric, who have the Town franchise. It is also intended to contribute substantially to the province-wide power grid. It represents an investment of \$42 million, which, in the end result, is an investment cost which is borne by the Alberta consumer. The costs are set out in Part VIII of this report.

Displacement of Native Peoples

The introduction of the railway and the mine, and we cannot single out one or the other, caused the serious displacement of a significant number of native families. These proud, self-sufficient persons found them-

selves deprived of their complete isolation, as well as now having to face the problems of living in close proximity with an industrialized community. Their entire way of life was changed. It took them 5 years of formal negotiation to obtain land grants. Their homes, their pasture, their stock were violated. The province has now made land settlements, which they have accepted. Some of the native people have found employment in mining or the fledgling lumber industry. Others are seeking new forms of employing their traditional skills. Some have turned to tourism.

Generally this group have made important steps towards co-ordinating their activities, both among themselves and with the new community. Their disruption has however, been great indeed.

PART V: The Operational Phase

As we have already indicated the contract for the supply was predicated on underground mining operations.

While early planning had anticipated the development of the Numbers 1 and 3 Mine areas, their reserves are at a comparatively steep pitch, that is, in excess of 20°. As effective means of economically mining the reserves had not been developed the Company planned instead to go to the mining of the thick (over 20') No. 4 Seams in the areas designated as Mines 2, 5 and 9. The proposed exploitation of the Number 9 area was based on a plan to drive the Number 2 Mine shafts through to Sheep Creek, and they could be adapted as tunnels for coal transport from Number 9 through the Number 2 workings. The Number 9 area is literally on the other side of a mountain from the Numbers 2 and 5 areas. Transportation through the mountain would be more economical than providing alternate transportation around the mountain area to the cleaning and loading facilities situated near the Numbers 2 and 5 Mine areas. The significance of this planning for the development of Number 9 becomes evident when we discuss later the failure of the plan to tunnel through to the Number 9 or Sheep Creek area. It was also expected that the Numbers 10 and 11 Seams in the Number 2 and Number 5 Mine areas would be mineable at a later date.

The Number 4 Seam in the Numbers 2 and 5 Mine areas was thick averaging about 20' and comparatively flat (under 20° pitch). As conventional techniques allow mining only about 10' of such a seam, the

mining would be that of "mining coal in coal" and only one half of the seam can be recovered. What is left is lost to future removal. It may be noted that there are no government restraints placed on this form of mining from a conservation point of view.

The Number 4 Seam in the Numbers 2 and 5 Mine area was soft in the lower half. The upper 2' or less is often formed of a cap rock with thin interbedded coal layers which has often created varying problems in mining. The roof rock of fairly massive shale or sandy shale, was found later to have sets of steep joints, low angle slips and other planes of weakness. These weak planes caused many problems of support.

The planning, at the contract stage, called for the extensive use of mechanized longwall mining. This method involves removing coal in continuous slices along an advancing working face. As the face advances, the supports are advanced allowing the roof strata to cave behind. In the Company's Numbers 2 and 5 Mines, all the coal would be removed from a 10' thick layer in the upper half of the seam. The bottom half would be abandoned. This method had not been tried in conditions such as those encountered in the particular area, but had been used extensively in parts of Europe. It has also been used in Nova Scotia and the U.S. Its economic feasibility in the Smoky River conditions was by no means assured. It was, however, important for the Company to attain high rates of production to meet the contract, and it was expected that the longwall system would best achieve this end.

Equipment for longwall mining, some of it of a new untested

design, was acquired. The bulk of the miners recruited in the United Kingdom and Nova Scotia were sought on the basis of longwall experience. There were no miners experienced in longwall mining in Western Canada. This method was to be used in combination with so-called continuous mining machines which would be used for more conventional mining known as room and pillar mining. Room and pillar mining involves the extraction of coal around large pillars which are initially left in place as roof support, but later removed after the selected working area has been cut into rooms. In favourable conditions, the longwall method is effective to give high production and a relatively high percentage of extraction. It requires expensive equipment, skilled workmen and suitable and consistent behaviour of roof and floor strata. It is difficult to cope with unexpected or irregular conditions.

The size of the contract commitment demanded high rates of production and left little room for change if adverse conditions were encountered. Unfortunately a number of problems did arise, the most serious of which were geological in nature. The roof areas of the Number 2 and Number 5 Mines were found to be faulted with the result that more extensive and expensive roof supports became necessary, particularly in roadway areas. The nature of the strata, especially that in the Number 5 Mine, also caused considerable difficulty with roof control. As the mining proceeded, these problems were aggravated by the fact that the coal was under very deep cover and resultant pressure dynamics caused floor heaving as well. The dual problems with roofs and floors became major factors in the poor production tonnages which were being realized.

The Company also began experiencing problems with its underground personnel. Miners with different backgrounds and work experiences had been brought in from the United Kingdom, Eastern Canada, and various other parts of the world. Difficulties were faced by the predominately U.K. management in forming cohesive, productive work units from employees with these wide ranging backgrounds. The immediate pressure to produce a high volume of coal in the difficult conditions previously mentioned added to the problems of creating an atmosphere of harmony. As a result, absenteeism was high and turnover became a major problem. The Company ultimately accepted a 5 day work week in bargaining with its employees, a concession that negated plans of a 7 day work week on which the high production volumes were based. The change from a 7 day work week to a 5 day one was a serious blow to these production plans.

Throughout this period problems with the longwall equipment, which was virtually untried in the conditions encountered, were continuously experienced. In spite of repeated attempts by the Company and the manufacturer to solve these, they continued unabated and further hampered efforts to meet production targets.

Production was considerably below target and it was decided to open a small strip mine (Number 8) to give supplemental tonnage. This development was contracted out to a subsidiary of the Mannix organization. The contractor undertook this operation with his own crew and equipment and delivered the mined product to the Company. It was in production by June of 1971.

The longwall equipment had been put into operation in the Number 5 Mine in November of 1970 but was abandoned in May, 1971. Another unit was installed in the Number 2 Mine in January, 1971, but was withdrawn in June, 1971. This was done with the concurrence of consultants.

Your Commissioners have investigated the wisdom of this decision, which meant that it would be very difficult to meet the contract, expensive equipment was abandoned, and recruited skills were unused. It is not possible to say the method would have worked had the Company persevered in its attempts. A smaller scale experimental or pilot project might have enabled the Company to anticipate the problem. One thing is clear and that is that the need to meet capacity precluded any meaningful experimentation.

The equipment in the Number 2 Mine might have been employed in the Number 5 Mine when the equipment failed. There was no time for this experimentation. The Company decided to change to all room and pillar mining. The mining plans were changed. Additional continuous mining machines had to be purchased and put into operation, miners had to be retrained and new development headings created to prepare areas for room and pillar mining. This necessitated the establishment of new layouts, some of which were adversely affected by the openings created for the longwall equipment. Continuous mining methods are more adaptable to changing conditions but productivity may be less and percentage of recovery of coal often less. Despite the conversion the Company has never been successful in attaining scheduled production. The grave deficiencies in production are illustrated by this compilation taken from Company records by Mr. Wardell:

Schedule 1: Raw Coal Output - Long Tons
Taken From McIntyre Monthly Reports.

	<u>No. 2 Mine</u>			<u>No. 5 Mine</u>		
	<u>Quarter</u>	<u>Year</u>	<u>Target</u>	<u>Quarter</u>	<u>Year</u>	<u>Target</u>
<u>1969.</u>						
To March	23,013			-		
June	25,932			-		
September	48,045			5,680		
December	<u>60,987</u>	<u>157,977</u>	-	<u>22,957</u>	<u>28,637</u>	-
<u>1970.</u>						
March	68,398			82,175		
June	111,365			126,779		
September	129,970			124,552		
December	<u>142,960</u>	<u>452,693</u>	-	<u>190,929</u>	<u>524,435</u>	-
<u>1971.</u>						
March	185,721			202,168		
June	215,146			201,762		
September	197,608			191,622		
December	<u>235,570</u>	<u>834,045</u>	<u>1,073,340</u>	<u>197,872</u>	<u>793,424</u>	<u>1,062,840</u>
<u>1972.</u>						
March	266,077			129,500		
June	205,320			167,774		
September	192,266			199,918		
December	<u>184,316</u>	<u>846,979</u>	<u>1,022,208</u>	<u>134,503</u>	<u>631,695</u>	<u>1,022,208</u>
<u>1973.</u>						
March	191,736	-	-	67,855	-	-
June	180,825			-		

What was needed, it must be remembered, was 2 million long tons per year of clean coal, which is roughly equivalent to 3 million tons annually of raw coal.

The Company's costs were much higher than expected and losses were sustained. In addition to the technical difficulties, it had problems in recruiting, training and retaining its working forces. The preparation plant encountered difficulties in meeting its output. In 1971 the average recovery through the plant was only 61.6%. Substantial revisions had to be made. The plant is now producing a product that meets requirement at an average recovery of 65.0%, going as high as 69.1%. Laboratory investigations had indicated recovery could theoretically run to 75%.

A significant management decision was taken in early 1971 when the Company found an occurrence of coal that lay near enough to the surface to be mined by open pit methods, and opened a pit to provide coal to make up the deficiency of coal from the underground operations. This is now the Number 8 Mine. Mining by open pit methods has been continued since then by a contractor. Output has increased until it is greater than underground production, and operating costs are less. Additional tonnages have been found which can be mined by open pit methods, and the method has become very attractive to the Company.

In July of 1971 the Paul Weir Company apparently took over temporary supervision of the mining operations. It was apparent that there were management problems on the minesite, and the Company considered it essential to put in a highly qualified general manager. It reviewed the production

of the mines and indicated the need for the opening and development of a new underground mine by January, 1973. That company also indicated the need for development of supplemental strip reserves. The consultants' close involvement ended in the fall of 1971, when the Company resumed control.

Labour turnover is always high at new mines, especially in remote locations. This was certainly the case at McIntyre. During 1970 it averaged 7.7% per month, i.e. a rate of over 90% for the full year. This posed great problems and pressures on the supervisory staff which were also compounded by changes among the supervisory staff. This made it urgent that adequate living accommodation be provided in the town of Grande Cache in order that families could be brought in and a more stable community and working force would result. Thus it was in the interest of the Company that housing in Grande Cache be expedited as much as possible. As accommodation improved, and a more stable community developed, manpower shortages became less serious, although some recruitment and training programs were nearly always needed.

It also appears probable that the recruitment of large numbers of miners from other provinces and countries introduced additional problems to the operations of the mine. These men and their families experienced great social changes in moving to the new remote community and these created certain tensions. Moreover they sometimes brought to their new employer traditions and attitudes and practices which required discussions or retraining or changes in schedules and plans for the operation of the mine. For example, rockbolts are seldom used for roof support in European coal

mines although they are very commonly used in American mines, and the use of rubber tired mining machines depends on the use of rockbolts for support.

Information provided to the Commission by the Grande Cache Chamber of Commerce shows that the largest proportion of employees on the Company payroll in 1970 were from Alberta, followed by employees from the U.K., Saskatchewan and Nova Scotia in that order. No more recent information has been provided. The employees from the U.K. and Nova Scotia were generally in the skilled miner group, while western Canadian employees were distributed through all categories of employment.

There were numerous changes in Company personnel, including changes in upper level management. A new mine manager, Mr. W. Murray, and a new Coal Division manager, Mr. C. E. Richardson, were appointed in 1971. On June 14, 1972, a new president, Mr. R. B. Fulton, was appointed. The latter, whose past experience was in other non-coal mining endeavours, became extensively involved in the Company's coal operations and remains closely in charge of them.

It was apparent to Mr. Fulton that the contract production demands could not be met and the Company was sustaining substantial losses. Its losses according to its submission to the Commission, were \$22,352,000 as of April 30, 1973. Mr. Fulton reviewed the operations and then met with the Japanese buyers in September and December of 1972 with a view to attempting some renegotiation of the contract.

The October Labour Shutdown

In the meantime, a serious labour problem had developed. This culminated in a work stoppage at both mines in October of 1972. The Company claims that the stoppage resulted from disciplinary action it had taken. The miners deny this. The disciplinary action probably provided the occasion for the stoppage, but subsequent decision by the Acting Director of Mines indicated that appropriate safety standards were not being met, particularly in the Number 5 Mine. Your Commissioners do not find substantial disregard of the regulations governing mining operations, but the urgent need to keep up production to attempt to meet the contracted commitment resulted in production being given a priority over a high standard of safety. Primary responsibility for a safe operation lies with management. The external responsibility for ensuring that safety standards are met is, of course, vested in the Energy Resources Conservation Board.

The regular District Mining Inspector, on a recent visit, had not reported any serious problems but the union was unwilling to accept the judgment of the District Inspector. The dispute then went to the Board of Industrial Relations whose Chairman requested that the Acting Director of Mines carry out an inspection. This official made an inspection in company with mine and union officials and gave orders for certain repairs to be made to increase the safety of the working places; mining was prohibited in Number 5 Mine until repairs were made there. This work was done in the following weeks, largely through devoting an extensive amount of working time to providing timber supports in the Number 5 Mine to supplement the rockbolts.

The Closure of Number 5 Mine

In the fall of 1972, Mr. Fulton made his first approach to the Japanese buyers. He suggested that consideration be given to a 6 year price commitment. The Company had, in his view, "costed" or economically recoverable reserves for that period of time. He was not then talking about reducing the term of the contract, but reducing the term of the price commitment. The "costed" reserves then available were not sufficient to meet the entire 15 year contract. Mr. Fulton's price considerations at this time were based on a return on \$56 million invested, no return on some of the capital expenditure, and no recovery of losses. At this time, the Company's investment including losses was in the order of \$80 million. Notwithstanding this very large investment, the losses that were being sustained were heading the Coal Division if not the Company into bankruptcy.

Mr. Fulton again met the Japanese buyers in December of 1972 with a view to "negotiating" the price. Costs had continued to increase and in his view the situation was desperate. At the conclusion of his negotiations at this session, it was indicated to Mr. Fulton that if he were able to demonstrate a reduction in costs, then at his next meeting, at the beginning of April, the buyers would consider a price of up to \$21.00 per long clean ton.

Mr. Fulton returned to Canada just before Christmas, 1972 determined to demonstrate some cost reduction. It was clear that some steps had to be taken to reduce costs in any event, regardless of the constraints imposed by the Japanese negotiations.

It appeared to Mr. Fulton that the area of highest cost was to be found in the Number 5 Mine area. At the end of the third week in January, 1973, it was decided to close the Number 5 Mine and increase production from the Number 2 Underground Mine and the Number 8 Strip Mine. The President of the Coal Division and its Mine Manager, both located in Grande Cache, were not consulted in any way in arriving at this decision nor was the provincial government or union. Since this was the action that triggered the public outcry and resulted in the formation of this Commission, it is useful to record a short chronology of events for the critical period.

December, 1972. Negotiations underway with Japanese for better price and possible 6 year contract along with other provisions. Told by Japanese no prospect of price increase until their costs were brought under control and suggested this be done by April 1, 1973.

January, 1973. First 2 weeks spent in examination of costs by headquarters staff in Toronto and Management (Toronto) decision to recommend closure of Number 5 Mine.

January 5, 1973. Instruction issued to President of Coal Division to apply for permit to open Number 9 Strip Mine.

January 10, 1973. Mr. Richardson and his officers appeared before a provincial Cabinet Committee and reviewed operations with need for Number 9 Mine. The

Company officers projected output based on continued operation of two underground mines. (i.e. Number 2 and Number 5)

January 19, 1973.	Mr. Fulton discussed closing of Number 5 Mine with 3 members of his Executive Committee.
January 25, 1973.	Board of Directors approved recommendation to close Number 5 Mine.
January 27-28, 1973.	President Fulton at Grande Cache to advise senior management of decision to close the mine and spell out procedures to be followed.
January 29, 1973.	Mr. Fulton met provincial Ministers in Edmonton and Mr. Richardson with other Ministers in Calgary to advise them of closure.
January 30, 1973.	Mr. Richardson met union representatives in Grande Cache to advise of closure.
January 31, 1973.	Number 5 Mine stopped production. 206 employees laid off.
March 23 - April 12, 1973.	Negotiation team in Japan culminating in new 2 year contract with increased price.

The course of events would seem to indicate almost a "panic" situation, even when judged in the presence of a critically deteriorating financial position and the insistence of the Japanese. We point out there was a space of almost 2 months between the Board decision and the next known meeting with the Japanese. The essential action took place in 7 days.

The implications of this decision were widespread. The "realignment" of production was a change of the policy with respect to underground mining. What had started as a 100% underground mining operation was being turned into an operation likely to produce only 1/3 of its coal from underground operations. This meant the termination of employment of a number of skilled underground miners. It meant a greater emphasis on the less labour intensive stripping operations which might be conducted largely by those skilled as operators of heavy equipment: a less stable work force in terms of permanent residence in the community.

Any reduction in the labour force would have and had profound effects on the community, economically and morally. It also meant that the 2 million tons per year contract figure could not be met. This would, of course, affect the A.R.R.'s revenues, as well as the province's royalty income. It would also affect the availability of reject coal for the Alberta Power Plant.

We propose reviewing that decision to see if it is justified either selfishly in the Company's sole interest, or in the light of the various other interests affected by it.

The Commissioners do not doubt that some effective steps were needed to reduce cost. It is apparent that one of the most effective means of improving the Company's position was to find some manner of increasing productivity, as there were substantial fixed costs, both of a capital and operational nature. Production could be increased by putting both underground mines on a 7 day a week operation, but there was not the manpower to do this, and past experience had shown serious labour problems, particularly absenteeism, resulted from a 7 day operation. In any event, union co-operation would be needed because the union contract did not permit 7 day week operations. An analysis of the underground operations would have indicated that significantly higher production was achieved on what is called the depillaring as distinct from development stage of underground mining. A change to the depillaring phase of operations would almost certainly improve productivity. It is clear, too, that an increase in productivity would be attractive to the buyers, the A.R.R. - C.N.R., the government, and Alberta Power. Mr. Fulton testified that there was really insufficient time, in his view, to consider the alternatives.

The decision that was made to close the Number 5 Mine was based on an anticipated reduction of costs. The loss in production from the closure of that mine was planned to be made up, to some extent, by increased production from the Number 2 Mine and the Number 8 Strip Mine. The decision to close Number 5 Mine resulted in the loss of developed reserves in the pillars of Number 5 Mine. These reserves, in our opinion, totalling approximately 1 million long raw tons of coal, are irretrievably lost.

Your Commissioners are of the view that a decision to depillar the Number 5 Mine before it was closed would have been economically sound. Depillaring operations are of higher productivity - lower cost as already demonstrated in the past. The mine was probably at a stage where depillaring would have been the next logical step. It appears, however, that no analysis of the cost of keeping Number 5 Mine in production was made. Indeed, in November, the Company's own internal reports predicted that Number 5 Mine costs would decrease in 1973 to a point below the costs for Number 2 Mine. The higher costs in Number 5 Mine in 1972 might have been explicable if any study had been made.

Your Commissioners can readily speculate that the October work stoppage and resultant retimbering operations affected cost and productivity, or that further development work was becoming uneconomical. The fact is that no study was made. The decision was based on gross cost comparisons. The decision to close Number 5 Mine was not, in our view, necessary or, indeed, sound even if viewed only in the Company's interests. Viewed in the context of the effect of the decision on the others vitally concerned in the welfare of the project -- the government, and the community -- it was unwise.

The Implementation of the Decision

The Company made the closure decision without consideration with the government, the union, or its own operating management. These interested parties were consulted only in relation to implementation, and suffered under the handicap of having been presented with a *fait accompli*.

Operating management was instructed to take the steps necessary to secure realignment: there is no suggestion that their views were sought. The government expressed concern and offered assistance in relocation of those whose services would be terminated. The realignment plan would only be successful with the co-operation of the union. The union asked that the Number 5 Mine at least be depillared and attrition be allowed to reduce the number of personnel. The Company rejected this, on the basis that its decision had been taken and it had decided to shift the Number 5 equipment to the Number 2 Mine and to terminate the employment of the miners working underground in Number 5, except for those necessary to maintain a 7 day working week in Number 2. The union indicated it would consider a 7 day working week if there were no terminations, but the terminations were, to the Company, a necessary part of the realignment plan. The union then suggested that instead of laying off workers on the basis of seniority, that voluntary "quits" be permitted. This was done. This too was a difficult decision from the Company's point of view, because there was no assurance that the better men would be left: indeed, there was a risk of experienced men leaving. It also meant there would have to be changes in crew allotments. Nonetheless, the Company did accept the union's view and it cannot be faulted for doing so. It was, however, unable to persuade the union to accept a 7 day operating week. The union's reluctance on this point may be difficult to appreciate when the number of industries operated on a 7 day week are considered including the strip operation in Number 8 where the same union represented the employees but the Company ought to have been aware of the real difficulty of persuading the union to accept a 7 day operating week.

The New Contract

In April of 1973, Mr. Fulton and other representatives of the Company succeeded in cancelling the original 15 year 29.5 million ton contract with the buyers. In its place is a contract for 1 1/4 million tons at \$21.95 (F.O.B. Vancouver), for 1973, with 1 million tons for 1974 at a price to be negotiated.

The Company felt it could not obtain a price of the order it needed if the resultant effect was to give all of the other suppliers a ground for pressing for re-negotiation of their respective contracts. It also felt that the prices on the "spot" market would probably be much more attractive in the future and it should look to making some sales on that market, either to U.S. or Japanese buyers. The Japanese buyers are, it must be noted, a cartel and there is no competitive market in Japan. The Japanese buyers have indicated a strong desire to maintain long term contracts. They buy Canadian and Australian coal on long term arrangements. American coal is largely bought on a "spot" basis. Eastern Canadian users of coking coal appear up to this time to have assured U.S. sources available with which Western Canadian coal cannot economically compete. The Company has made one sale to a U.S. steel producer at the same price as to the Japanese (F.O.B. Grande Cache), but prospects for this market depend on an increase in U.S. prices to justify the increased haulage costs from the minesite.

The decision to terminate the 15 year contract is a serious one. The stability provided by such a contract was important to the miners and the community in which they live. Of course, such stability may be

illusory, as it was under the terms of the original contract.

From the point of view of the community and the government stability in the operation is essential. The community would be seriously undermined by a "stop-go" situation. The Company would face difficulties if production were not maintained at a fairly stable level. The Company will have to be prepared to finance production and stockpiling if lean periods are encountered. It would certainly be difficult to maintain its labour force without sustained production. The danger of entering into the competitive short term market is that it is much more difficult to sustain stable production levels. The new contract will introduce new marketing factors as the original contract being a long term fixed price contract was essentially a projected cost plus reasonable rates of return agreement. The market introduces new, perhaps rewarding, uncertainties.

The Present Relationship of Strip and Underground Mining

The Company has assured the Commission of its intention to continue underground operations, with these probably providing 1/3, or perhaps 1/2 of its coal. The Company characterized the underground coal as somewhat better coal than strip coal. It recognizes that the government may insist on its exploiting the underground reserves if it is to have the continued right to work the more easily mined strip areas. There is no obligation on the Company to carry out this intention.

Strip or open pit mining is, at present, an economic necessity to

the operations. Strip coal is presently more inexpensively removed than the underground coal. There is considerable flexibility in its production. The attendant "mining skills" are more readily available, and changes in the labour force easier to accomplish.

There is, of course, environmental concern about the impact of strip mining. Thus far the Company has been able to meet the criteria established at a satisfactory cost. Larger operations have more serious implications from an environmental point of view. There will undoubtedly be some problems in balancing of interest between environmental purity on one hand and the need for economic production of coal. Consideration will have to be given the fact that the major investment for the Smoky River development has already been made by both the Company and the province.

The Company satisfied the Commission that the administrative difficulty of meeting the present requirements of all the government departments imposed an excessive and unnecessary burden on the Company. It finds itself attempting to deal with the Energy Resources Conservation Board, the Department of Lands and Forests, and the Department of the Environment, without effective co-ordination of the requirements of each entity.

PART VI: The Viability of the Operation

An evaluation of the viability of the coal operation necessitates an examination of the economically recoverable reserves, recoverable by both underground and surface operations (strip or open pit mining).

In addition to assessing the Company's studies your Commissioners instructed 2 of its experts, Mr. Wardell and Mr. Boyd, to undertake an examination of the recoverable reserves held by the Company in the Smoky River area.

Mr. Boyd was also instructed to do a study of the capabilities of the Company's preparation plant where the coal is reduced to the qualities specified by the buyers. Mr. Boyd is of the opinion that the plant is capable of producing 1.7 million long tons of clean coal on a 5 day week, 2.5 million tons on a 7 day week. The capacity of the plant is an important factor in assessing the prospects for the operation's success, since it establishes a practical maximum production. It is also desirable that production be kept as close as possible to optimum capabilities because of the high fixed cost (the plant represents a 14 million dollar investment). The plant in optimum operation should supply approximately 7% of its input as output to Alberta Power. The Commissioners accept Mr. Boyd's opinion on the capacities of the plant.

The underground mining reserves have been assessed on the basis of present economic feasibility judged in the light of current prices, costs and technology, and on the basis that costs and prices will be subject to

parallel fluctuations with changing economic conditions. The surface (open pit or strip) mining was also evaluated with reference to the amount of overburden material that must be removed to mine the coal. In the present Number 8 area the amount is for example, between 2.5 and 3.5 to 1.

The Viability of Future Mining Operations

In general terms, the viability of a coal mining operation depends on the following considerations:

(a) the quantity and quality of the coal which is present in the lease areas controlled by the Company, that is, on the geological reserves of coal.

(b) the proportion which can be recovered to yield a profit by techniques which are presently available or which may become available in the near future. Many geological reserves occur in circumstances where mining operations of any kind are not feasible, while in those areas which can be mined recovery is never entirely complete because of the difficulty of mining great thicknesses and the need of leaving pillars of coal for protection of the working places.

(c) the proportion of coal that is available for market after impurities such as rock and high ash components are removed. There further occurs oxidization of some of the coal that renders it unsuitable, as well as a small loss of clean coal during handling and distribution.

(d) the costs of mining, preparation plant operations, plant services, administration, transportation and handling. These costs must include the direct day to day operating costs as well as maintenance and replacement of equipment and plant, and provision must be made for amortization

of any new capital expenditures that may be needed to enable production to occur.

The total of the production and distribution costs must be less than the market price that will be available, if a profit is to be made. Unless this market price is such that a profit can be obtained, or unless there are very good prospects for a profit to be made, there is no incentive for the Company to continue its coal operations.

The quality and quantity of the Company's coal deposits will now be considered in more detail.

(a) Quality

Variations of quality are almost always found in the coals that may occur in a district. These variations may be in BTU value, rank, ash content, or coking quality. Variations in quality, especially in ash content, commonly occur between seams, between layers within the same seam, or even along a given layer of coal.

The coal that occurs in the leases held by the Company is generally of low volatile bituminous rank, which can be cleaned to a low ash product. The Smoky River coal has very good coking properties and it is therefore a desirable, but not essential type of coal for use in metallurgical industries. It is very useful for blending with other coals for making coke, it has commanded premium prices amongst Canadian export coals, and it is considered to compare favourably with the best American coking coal. However, where the coal is oxidized (as near the surface in open pits) its coking quality is seriously reduced, and this oxidized coal is not suitable for export sales.

Tests on coal samples from the Copton Lease area (Number 20 Mine) indicated that they cannot be coked by themselves, although they may be blended with low volatile coal to make a satisfactory strong coke.

(b) Quantity

It must first be noted that the quantity of coal that can be profitably recovered from an area is related to costs and prices, as well as on the physical dimensions of the deposits. It is usual to categorize estimates, or calculations, of ore or coal reserves according to the completeness and reliability of the information on which the estimates have been made. There is no unanimity on the choice of terms used to describe each category or on the definitions that may be used, but usually a three fold classification is used for reserves *in place*. Thus the U.S. Geological Survey has proposed the terms 'measured', 'indicated', or 'inferred' in order of decreasing reliability. Other comparable terms are 'proven', 'partly proven', and 'possible'. These terms are generally used to describe total reserves *in place* in an area or deposit, subject to certain limits which may be set, such as maximum depth and minimum thickness of seams which are to be considered.

As already mentioned it is necessary to distinguish estimates of the total geological reserves *in place* from estimates of the actual tonnages that can be recovered by present mining methods, and those that can be mined to yield a profit. Those reserves that are believed to be physically recoverable by presently available mining methods are termed in this report as recoverable reserves. The percentage of recovery depends on the physical setting of the coal and its surrounding rock, on the physical difficulties that may exist in mining the coal, and on the equipment and methods that may

be used. The portion of recoverable reserves which probably can be mined to yield a profit, assuming current market prices and efficient operation, are termed economically recoverable reserves. The size of these reserves depends on the net selling price that is received for the coal, in that the greater the value of the coal, the greater the percentage of reserves that can profitably be recovered. Estimates of economically recoverable reserves can only be made after consideration is given to the mining methods that can be employed and to the economics of the mining operation. The validity of the estimate depends on the accuracy with which mining conditions and costs can be estimated. Where favourable conditions obtain, the recoverable reserves may be perhaps 80 to 90 percent of the geological reserves, while where conditions are very unfavourable, the economically recoverable tonnage may be nil despite huge geological reserves.

The first estimates of the coal reserves on the Company's properties reported very large tonnages of coal *in place*, but these were based on sparse information. Little consideration was apparently given to the details of mining methods that would have to be employed or to the economics of mining. It seems to have been assumed that about 50% of all the coal *in place* could be recovered by mining, irrespective of seam thickness or inclination. The resulting estimates of recoverable coal thus did not recognize the difficulties inherent in mining seams in mountainous conditions, but created a very optimistic view of the potential of the area for coal production.

Subsequently, other studies of reserves have been made. Additional exploration work has been done and more is known of the mining problems, so

that more precise and realistic estimates are now possible. As exploration and better definition of the reserves have continued the general result has been that figures for total geological reserves remain high, but the figures for economically recoverable reserves have been sharply reduced. Nevertheless, there still remain some uncertainties about the total *in place* reserves in certain areas and differences of opinion and judgment with regard to the tonnages that can be mined, especially those tonnages that can be mined at a profit.

The Company geologist has reported to the Commission only tonnages which are considered to be in the measured (or proven) category, and has classified some of these tonnages as being recoverable. These are shown on the first 4 columns of Appendix 4. He has identified some of the recoverable tonnages as being developed or in the development stage: these are shown in Column 5 of Appendix 4.

The accuracy of the *in place* reserves is considered to be within 20%, based on the spacing of the points of observation. The classification of some of this tonnage as recoverable is based on estimates of mineability by the engineering staff; it appears that these are tonnages which the staff believes can be mined in a physical sense, although the economic feasibility of their recovery cannot be judged yet in many cases. It is likely that most of the coal that is developed or in the development stage can and will be mined and so can be considered as economically recoverable.

Of the areas noted in Appendix 4, Mine 2 is an underground operation with mining in progress in Number 4 Seam and exploratory adits being

driven in Number 11 Seam. Mine 5 was the underground operation in Number 4 Seam, which was closed. Exploratory entries are being driven in Number 4 Seam of Number 1 Mine, surface mining is proceeding in Number 8 Mine, and the Number 9 Mine area is being prepared for an initial surface mining operation.

The Company estimates do not include tonnages of coal *in place* where the frequency of observation points has been insufficient to enable calculations to be made with some confidence. It is reasonable to expect that there are still considerable additional tonnages to be explored and established in the Company's lease areas, and these can be brought into the category of measured reserves as exploration and development work is continued. However, tonnages which may be proven up in the future probably are in areas which are less accessible than those which have already been explored.

The above estimates of recoverable reserves include tonnages that occur in thick or steeply dipping seams, and it is doubtful if many of these reserves will be economically recoverable with present technology and at present prices. The Company estimates of reserves which may be recovered by open pit or stripping methods are predicated on certain strip ratios being economically feasible, but these rates were not reported.

Estimates were also prepared by expert witnesses of the tonnages which might be mineable under present and foreseeable future circumstances by underground and by surface methods. The estimates of coal that can be considered with confidence to be mineable by underground methods at this time are presented in Appendix 5 (prepared by K. Wardell), and strip

mining tonnages are shown in Appendix 6 (prepared by J. T. Boyd).

Before attempting to evaluate these estimates, it is necessary to review certain factors that affect the estimates of recovery. At present it is not practical to mine thicknesses of coal greater than about 8 to 10' with longwall equipment, or about 10 to 14' with continuous mining equipment. In seams of greater depth it is generally most efficient to work only in an 8 to 12' thickness of coal within the seam, usually leaving the extra thickness of coal in the floor. In the layer that is mined only part of the coal can be recovered and the remainder is left in pillars. The percentage of recovery then is generally lower in thick seams than in seams of less than 10'. Moreover, the efficiency of operation of continuous mining machines decreases significantly, and costs rise sharply, in seams inclined at more than about 15°. At inclinations greater than about 30° only the so called hand mining methods are generally applicable and mechanized mining becomes almost impossible. Therefore, when considering reserves which are economically recoverable, attention must be directed to portions of seams that are fairly flat (less than 20°) and tonnages from thick seams must be discounted to about what can be mined from a 10' slice. A possible exception to the foregoing limitations of great thickness and inclination may be provided by the hydraulic method of mining which appears to have good potential where favourable conditions of thickness, inclination and roof conditions exist.

Where open pit mining is considered, the cost of removing overburden sets a limit to the feasibility of mining. If the thickness of overburden is not constant, as the proportion of overburden to coal

increases (expressed as the strip ratio, usually in cubic yards of overburden per ton of raw coal produced), the cost of producing the coal increases. At some limiting strip ratio the costs of production equal the value of coal produced and no further strip mining can be economically done. Where conditions are suitable additional tonnage may be obtained beyond the limits of pit mining by augering for a depth of 100' to 200' or so into the seam where it is exposed along the highwall of the pit. In general, the greater the strip ratio that may be accepted, the greater the tonnage of coal that may be obtained by strip mining. The maximum strip ratio that may be accepted depends on the net value of the coal, and on the mining costs, which depend on the physical conditions, the equipment and the techniques employed for stripping.

At present strip mining at Number 8 Mine is being done with comparatively small sized equipment and at low stripping ratios (2 1/2 to 3 1/2 to 1). It was reported that the average strip ratios employed by several other large Canadian operations in mountainous terrain which are producing metallurgical coal by strip mining are in the range of 6 or 7 to 1 (and not all of these operations are profitable). Estimates by the Commission's expert, J. T. Boyd, show that average strip ratios of about 7 or 8 to 1 could probably be profitably employed in McIntyre conditions with 15 to 25 cubic yard shovels and 100 to 150 ton trucks. He also estimated that, by using a large 60 cubic yard dragline for stripping, ratios of up to 12 to 14 to 1 could probably be achieved. However, he emphasized that the application of such a machine would require very careful review and planning, and maximum efficiency would have to be obtained in conducting operations. Hence there are several strip ratios that might be considered,

according to the type of equipment used, and the reserves of coal that can be mined will depend on the strip ratios that can be employed.

It may be noted here that by working to lower strip ratios in surface mines, and to a lower percentage of recovery in underground mines, lower unit costs can generally be attained, and hence greater unit profits. This is achieved at the expense of lower tonnages recovered and the loss of coal that is left behind. Thus 'high grading' can be carried out in underground and surface operations, producing greater short term profits and the ultimate loss of mineable coal.

Evaluations

The following evaluations may be made of the estimates of mineable tonnage presented, based on information provided to the Commission.

At Number 1 Mine, exploratory work was to begin during 1973 in the Number 4 Seam. This seam is reported to be of suitable mineable thickness (about 9 1/2 to 11' thick) and fairly regular, but information about continuity or regularity is meagre and the dip of the seam is reported to be about 35°. In that area the Company has permitted a Professor Keenan (Keenella Mines) to undertake some experimentation, with a view to mining by longwall methods. The outlook for this programme is surrounded with uncertainty, and the Company expects that it would have to subsidize this operation in its early stage of production, if it can develop the production. It was reported that the possibility of hydraulic mining in this area is also being studied, but no opinions were expressed as to its effectiveness.

On present conventional technology the reserves, estimated at 7.8 million long raw tons physically recoverable, cannot be yet said to be economically recoverable. As some indication of the substantial variation between economically recoverable reserves and *in place* reserves, it should be noted that the *in place* reserves in the subject area are 46 million tons.

In Number 2 Mine area (Smoky River side) there are 3 seams, Numbers 4, 10 and 11. From the present entrance there are reported to be about 2.4 million tons (LRT) remaining in Number 4 Seam which can be recovered by underground methods, mainly by depillaring. Further development towards the northwest (Sheep Creek) has been stopped. The above tonnage can provide the basis for underground mining at a rate of perhaps a half million tons per year for 5 years. It was estimated by K. Wardell that another 2.6 million tons can be available from this seam through workings to be driven from the Sheep Creek Valley (2A Mine), and 1.38 million tons will be available from the Reiff Terrace Mine that can be opened from the Sheep Creek Valley. These mines can be opened after several years and could enable underground production to be continued for at least a 10 year period at half a million tons per year.

The opening and development of the 2A and Reiff Terrace Mines from the Sheep Creek Valley will require some capital expenditures, and funds must be available for this purpose. These are likely to be provided only if underground operations can be made profitable during the interim period. The drop in productivity of underground work during the first half of 1973 that was reported to the Commission must be reversed if underground mining can continue. It is expected that, with the cessation of new development work in Number 2 Mine and concentration of depillaring, the

productivity will increase and mining costs will be reduced. However, this can only be achieved by good management, stable operations, and efficient workmanship.

Another 1.4 million tons (LRT) is estimated by Wardell to be economically recoverable from Number 11 Seam in the Number 2 Mine area, of which about 50% can be retained after cleaning. Development has been initiated in this seam during 1973, but mining conditions have not been established. In the Number 10 Seam, Number 2 Mine, between Number 4 and Number 11 Seams, there is estimated to be another 1.7 million tons (LRT) of recoverable coal; but it is reported that poor roof conditions were found by initial development work and its economic mineability is not assured. No recent work has been done in this seam.

The mining of the coal in the Number 10 and 11 Seams in Number 2 Mine and in the underlying Number 4 Seam is complicated by the reported plan to establish a conveyor system through galleries in Number 11 Seam. This will carry coal from operations in the Sheep Creek Valley (No. 2A, Reiff Terrace and Number 9 Mines) through the mountain to the Smoky River Valley for delivery to the preparation plant. Such a system would lower transportation costs on all coal from these mines. However, substantial quantities of coal would have to be left as protective pillars in Number 11 Mine, thus reducing the mineable reserves. Moreover, it is quite possible that depillaring of coal from the Number 4 Seam (below Number 11 and 10 Seams) will cause subsidence and movement of the strata that may jeopardize mining of Number 10 and 11 Seams and security of the proposed conveyor system in Number 11 Seam. To leave unmined the necessary areas

in Number 4 Seam to protect the conveyor system in Number 11 Seam might involve the sterilization (or loss) of about 1 million tons of coal. Therefore it will be necessary to carry out very careful planning and scheduling of all work in this area if adequate exploitation of the coal in the Number 11, 10 and 4 Seams is to be achieved.

Very substantial tonnages of coal exist in the Number 2 Mine area in Numbers 2, 10 and 11 Seams, in addition to the tonnages reported above, but these occur at dips greater than 20 to 25°. Perhaps the hydraulic method of mining may be feasible at some future time, but these seams cannot be considered as economically mineable under present conditions.

Another 2.13 million tons of coal (LRT) is estimated by Wardell to be recoverable by underground mining from the Number 10 and 11 Seams in the Reiff Terrace area where moderate dips occur. Additional tonnages at steeper dips exist, but it is not likely that they can be profitably mined under present conditions.

Little information was presented to the Commission with regard to the coal in the Number 3 Mine area to enable any estimation of its possible economic recovery. The Company is presently investigating the feasibility of mining this area by hydraulic methods. The seam is steeply pitching and is approximately 20' thick, and at this point in time it is not possible to classify this thickness of seam as being economically mineable. The Kaiser operation in British Columbia is apparently achieving satisfactory results in mining a thicker seam by hydraulic means. In hydraulic operations the thicker seams are most favourable performers. Considerably more work will

be necessary before the recoverable reserves in that area of 13 million long raw tons can be classed as economically recoverable.

In the Number 5 Mine area the coal in Number 4 Seam that was left in pillars when the mine was closed is, in our opinion, unrecoverable. Other areas of Number 4 Seam beyond the mined and caved areas will be very difficult to reach. Moreover, the depth of cover, heavy ground pressures, and increasing dip that caused problems during previous mining, would make future mining difficult and expensive in this seam. Therefore, no reserves of mineable coal can be anticipated at this time in Number 4 Seam of Number 5 Mine.

It has been estimated by K. Wardell that about 1.2 million tons (LRT) of coal are recoverable from Number 10 and 11 Seams of Number 5 Mine by underground mining. These seams should be mined in descending order for best mining conditions. Access roads and surface facilities will have to be established to open these seams, and this work will entail some initial expense.

About a third of a million tons in the Number 7 Mine area (Campbell Flats and Fox Creek) are judged to be recoverable by strip mining at an average strip ratio of only 5 to 1. Some coal is reported to lie at moderate dips and be suitable for underground mining and there are other tonnages of coal in steeply pitching seams. No development has been done and the economic feasibility of mining the coal in this area is still to be established, although the Company estimates that over 17 million tons are recoverable.

Strip mining will deplete the present 1.5 million tons of coal that can be economically recovered at low strip ratios from Number 8 Mine by the end of 1974. This operation will provide the major part of the Company's coal production during this period. The work is being done by comparatively small sized equipment at strip ratios of about 3 to 1. There are additional tonnages in this area which are steeply dipping and not attractive at present so that there are no present plans for mining them, although the Company estimates over 12 million tons can be recovered.

An initial mining permit has been issued for Number 9 Mine, for mining over 9 million tons of metallurgical coal. This will be an open pit operation and production is due to begin during 1974. To obtain this tonnage a strip ratio of about 8 to 1 will be required and this will necessitate the use of larger, more productive, and more expensive equipment such as 15-25 cubic yard shovels and 100-150 ton trucks.

It must be noted that the Company proposes to conduct the projected Number 9 development with leased equipment and its own staff. It should then save the Mannix organization's management charges. It is cognizant of the fact that it must acquire its own expertise. The present operator (Mannix) does have the advantages of long experience and available pools of labour and equipment. An advantage of the Company's operation of this mine will be the fact that it is in the Company's economic interest to encourage home acquisition and settlement in the community.

At present, the ratio of about 8 to 1 appears to be about the maximum that can be employed for the profitable use of this range of equipment,

according to estimates of the expert witness, J. T. Boyd, and according to reports from other Canadian operations in similar conditions. The reserves in Number 7, 8 and 9 Mines available to the Company at this ratio will provide only about 5 to 6 years of production at a rate of 2 million raw long tons of coal per year (1.4 million clean tons). However, the opinion was expressed by Mr. Boyd that improvements in mining techniques during this period could make another 10 million tons available, assuming that prices and costs remain constant in relation to each other in the future.

There are very great *in place* tonnages of coal in the Number 9 Mine area, but they are only available at strip ratios greater than 8 to 1. For example, J. T. Boyd reported that about 20 million tons would be available at an average strip ratio of 11.3 to 1, using a combination dragline and truck and shovel system. This tonnage alone could probably have provided for the Company's requirements for 10 years. This type of operation could be feasible but would have to be very carefully studied and would require very skillful mining techniques. It would involve stripping ratios that are higher than any that are now employed in Canadian mountain conditions. Stripping costs would have to be reduced to about \$0.20 per cubic yard, whereas present costs with truck and shovels are estimated at \$0.53 per cubic yard.

If it were possible to operate with a still greater strip ratio of about 15 1/2 to 1, a total of about 76 million tons (LRT) would be recoverable from the Number 9 area according to another estimate of J. T. Boyd. This great tonnage would suffice for any production requirements of the Company for many years to come, but very large equipment would be required

to reduce the unit costs of stripping. Very careful study will be necessary before this can be considered as an economically practical alternative.

There are significant underground reserves in the Number 9 Mine area. They should be economically recoverable if the strip operations in the same area are designed and executed so as to protect the working areas. This will necessitate careful planning based on a determination to preserve these underground workings. For technical reasons simultaneous working would be difficult and successful underground operations in the Number 9 Mine area should be considered as a long term prospect. These reserves have not been defined, as insufficient knowledge of actual conditions, coupled with the risks of interference by the surface or strip operations above the proposed underground operations, precludes establishing secure reserve figures.

Large tonnages of coal are reported to be present in the Number 14 Mine (Grande Mountain) area. The Company estimates 44 million tons measured, of which 23 million are recoverable. Field work has not been detailed enough to place the tonnage in the proven category but about 12 1/2 million tons are considered by Boyd as partially proven and strippable and another 9 1/2 million tons may be inferred. Strip ratios of about 14 to 15 to 1 would be necessary to recover this tonnage by open methods, and as noted above, this would involve work at ratios greater than those which have yet been successful in Canadian mountain conditions. Some additional coal could be obtained by auger mining. In this area it is very likely that considerable tonnages of low pitch coal are present which could be

mined by underground methods, but the economic feasibility of doing so is not known. The seams lie a considerable distance above the valley floor and this presents a problem of access. Costs of transportation of coal to the present preparation plant would add to production costs. It is not possible at this time to regard the coal in Number 14 Mine area as being economically available in the immediate future, but it may be of value in the mid term future.

There are substantial tonnages present in the Number 20 (Copton Excol) area. The coal does not appear to have satisfactory coking qualities and unless further tests show improved quality or it can be acceptably blended, it must be classed as unmarketable.

In summary, there are about 11 1/2 million tons of coal which appear to be mineable by open pit methods under present conditions of average strip ratios of less than 8 to 1. This tonnage can provide for about 6 years of operation at a rate of about 2 million raw tons per year. Large additional tonnages are present in the Company's leases, in Number 9 and Number 14 Mine areas, and these can probably be exploited if very large equipment is employed and if operating efficiencies can be increased above those obtaining in present Canadian mountain practice. Strip coal reserves are shown in Appendix 6.

Tonnages of coal which are now recognized as mineable by underground methods total about 12 million tons LRT, as shown in Appendix 5. This tonnage can enable production to be carried out, for example, at a rate of 1 million tons a year for 10 to 12 years. However, careful planning

and scheduling will be essential to prevent interaction between seams from occurring, with the likely loss of coal. It will be necessary to provide enough lead time to allow production areas to be properly explored and developed before they are scheduled for full production. It will also be essential to reverse the trend of decreasing productivity of underground production units that occurred in the first 8 months of 1973.

These reserves are summarized in Schedule 2. The saleable coal will be reduced in cleaning. The recovery of clean coal produced by the preparation plant has been running between 50% and 70% with 60-65% a reasonable average.

Schedule 2: Coking Coal Reserves

Underground

1. Reserves of coking coal which can be mined by present underground methods at present economic conditions.

<u>Mine</u>	<u>Seam</u>	<u>Mineable Thickness</u>	<u>Tons (Millions, Long Raw)</u>	<u>Prep. Plant Recovery %</u>
2	4	10	2.34	65-70
2A	11	6.5	1.40	50
	10	8.0	1.70	
	4	10.0	2.16	65-70
Reiff Terrace	11	6.5	0.90	
	10	8.0	1.23	
	4	10.0	1.38	65-70
5	11	6.5	0.54	50?
	10	8.0	0.65	
TOTAL			12.30	

Surface

2. Reserves of coal which can be mined by surface methods at present economic conditions (strip ratio less than 8:1)

<u>Mine</u>	<u>Tons (Millions, Long Raw)</u>	<u>Strip Ratio</u>
8	1.5	3.1:1
9	9.6	7.8:1
7	0.4	5.0:1
TOTAL	11.5	

Potential Surface

3. Alternatives - reserves which can be mined by surface mining at higher stripping ratios.

<u>Mine</u>			
9 (alternate 1)	20.0	11.3:1	Includes above tonnage in Section 2
or 9 (alternate 2)	76.3	15.5:1	
and 14	12.3	13.8:1	

It will be seen, therefore, that the short term (6 year) prospects for the Smoky River coal operation are good. There are sufficient economically recoverable reserves to sustain production at around 2 million long clean tons per year, for over 6 years. This prediction is based on the assumption that geological conditions underground will be no worse than those already encountered, and that the Company will be able to handle the strip operation satisfactorily.

The mid term (7-10 years) prospects appear to be fair. So far as underground operations are concerned it is not sensible to predict which operations (Number 1, 3, deep 9 or 11) will come into production because planning has not advanced sufficiently far. Planning will, of course, have to come shortly. It is clear that the Company is lacking sufficient technical planning staff to provide the kind of long range planning that is needed. The present operating personnel are fully occupied in carrying out the work immediately at hand and the planning for the next 6 years cannot be left to chance. Hydraulic mining may provide an answer, but it and any other feasibility studies must be carried through properly so that mines are available at the end of 5 years. In addition preliminary plans as to development required for the future underground operations of Number 9 must be prepared now so that the surface operations can be engineered appropriately. The surface operations in the mid term period also appear to be a fair prospect, but long range planning is needed because different equipment and different skills will have to be employed.

The long term prospects depend upon advances in technology in mining steeply pitched underground seams economically, and similarly in the removal of overburden at ratios of 11:1 or higher. A solution to the

problem of access to Grande Mountain is also necessary. Of course, extensive increases in the price of coking coal (over and above that reflected by inflation or increased costs) would also significantly improve the long term prospects. The latter cannot be taken for granted, and extensive long range planning is essential.

The Viability of the Coal Division

In addition to the evidence of the Company and the experts Boyd and Wardell, the Commission also had evidence from Mr. David Stanley of Wood Gundy, as to the economic viability of the Company.

It must be recognized that the Company is carrying substantial losses of over 22 million dollars. It has loans of about 70 million dollars upon which it is paying interest. Its interest charges are a major factor in its economic viability. We are satisfied as to the Company's viability over the short term. Mr. Stanley produced projections based on past experience, which appear to be reasonable in the light of the evidence, and his conclusion appears correct.

There is insufficient evidence to enable your Commissioners to express a categorical opinion as to the coal division's mid term viability. We can see no factor which would militate against mid term success. We think it probable that coal prices will, to some significant extent, outstrip production costs and ensure that viability, but the market is a peculiarly unpredictable one. If the Company undertakes the careful long range

planning the situation demands, its economic prospects for the mid term will be enhanced.

The long term prospects appear to us even more dependent upon a significant price increase or some sound technological achievement as might develop in hydraulic mining or more sophisticated equipment for deep strip mining.

The Coal Division's Financial Statements

As part of its submission to the Commission, the Company filed certain financial data relating to the coal division. Relevant portions of that data are Appendix 7 to this report. These data are as of April 30, 1973. There does not appear to have been any significant change in the Company's position to the date of the conclusion of our hearings, October 5, 1973.

These statements reveal a total investment of 104 million dollars, of which 70 million dollars are borrowed funds. The Company's losses to date are in the order of 22 million, of which 9.3 million are depreciation or amortization. It is unlikely that the coal division of the Company will be able to make any significant contribution to debt reduction in the short term. Liquidation of the coal division holdings would not appear to be feasible, and it is our opinion that the interests of the Company are best served by the continuation of the Smoky River mining interests.

In the unlikely event that the Company were to decide to abandon its coal operations, the operation would be economically attractive to other operators who would not be burdened with the carriage of the capital burden now being borne by the Coal Division. Your Commissioners are of the view that coal exploitation in the Smoky River area is assured if not in the hands of the Company, in the hands of a successor, over the medium term. Your Commissioners are also of the view that continued exploitation can reasonably be expected over the long term. These views are based on the assumption that if the Company were to abandon its operations, physical facilities and equipment would be conveyed to a successor at a cost not exceeding the depreciated cost to the Company. Whether the Company could expect to demand or a purchaser pay, more than that figure will be largely dependent upon the price of coking coal. Exploitation over the long term may show some greater tendency to favour open pit or strip mining because of the fact that its costs and production are more flexible. In addition some technological advance is probably needed to develop the steeply pitching seams. Your Commissioners feel it likely that the long term development will include underground mining, but we have a greater degree of confidence in the economic potential of the strip operations. Sound long range planning implemented now ought to increase the degree of confidence in the long term future of underground mining.

Significant advances in the price to be paid for coking coal will, of course, increase the measure of confidence in our assessments.

The Marketing of Coking Coal

To all intents and purposes the only present market for Western Canadian coking coal is the Japanese steel buyers. Canada is their third supplier in terms of quantity, behind Australia and the United States. To this point Japanese purchases have been based on long term commitments. With long term contracts the price is largely based on projected cost plus a reasonable rate of return, with the limiting factor that the buyers are not willing to exceed significantly the price at which they are able to buy high grade U.S. coking coal.

The coking coal market is extremely complex. The Japanese steel mills, for example, blend various qualities of coal to provide coke for steel production. Up to 20 different qualities, of 20 different prices, will be blended. The allocation of these components depends upon the chemical qualities and the price. If, for example, high quality coking coal were unobtainable or unreasonably high priced, the blend would be adjusted. Thus the cost of other coals and the price of steel will be factors in determining the amount of high quality coking coal that can or should be required. For example, for several years, the British Steel Corporation maintained its production without any high quality coking coal at all. The price for high grade coking coal is therefore not merely a question of supply and demand. There is also the prospect that some technological change in steel making might develop.

The price to be paid for coking coal then depends upon supply and demand of the coal, the steel market price, and the price of other coals.

Transportation costs are also a factor which must be considered by the buyer. Another element in assessing the market is the relative international currency values.

There have been substantial coal price increases for high quality coking coal. The McIntyre coal itself has escalated from \$13.95 U.S. to \$21.95 Canadian in 4 years. To some extent this reflects the relative revaluation of the Japanese yen, which has moved from \$30.20 for 10,000 in 1969 to \$40.00 in April, 1973.

The international market for high quality coking coal has come to be the price of such coal in West Virginia. That price is currently in the range of \$17.00-19.00 per long ton F.O.B. Mine. It has increased \$2.00 per ton in the last year, largely attributable to increased cost.

Some recent developments will probably effect market conditions. The U.S. reserves are now deep reserves. U.S. buyers have purchased pilot shipments of Canadian coal. The new Australian government has evidenced an unwillingness to lock its production into long term contracts with the Japanese buyers.

It appears to your Commissioners that the market price for high grade coking coal such as that produced by the Company will rise beyond the rise attributable to general cost increases. We are unable to assess the magnitude of the anticipated increase, but it would not be unreasonable to expect the increase to continue at the rate of increase we have seen over the past few years, which must be adjusted in real terms for currency

fluctuations.

Much has been made of the "energy" crisis which was emerging during the hearings.

At the time this report was under preparation the world was confronted with an energy crisis of major and unprecedented proportions. Shutting off or restricting supplies of petroleum by Middle East oil producing countries has produced a crisis in the United States to the extent that on November 7, President Nixon announced tough new measures to make that country self sufficient in energy matters as rapidly as possible. It is significant that he stated the objective: "to ensure that by the end of this decade we will have developed the potential to meet our own energy needs without depending on any foreign nation". No mention of Canada being excluded nor of "continental" resources, an omission which might have great significance for Canada. Indeed, the Valdez Pipeline, stalled for so long, was approved a few days later which will insure Prudhoe Bay oil being moved to the U.S. independent of Canadian territory as compared to the proposed McKenzie Valley pipeline.

As if this was not enough to alarm Canadians it was followed by a further significant statement. After the Canadian government had unilaterally, and without consultation with the U.S., raised the export tax on Canadian crude to \$1.90 per barrel (from \$0.40) President Nixon said on November 15, and referring to "our Canadian friends", "They can be pretty tough on us sometimes when they are looking down our throats".

While petroleum supplies are the centre of daily, almost hourly, political moves and power plays at this time it does focus attention on all forms of energy as becoming of vital importance. Alberta has approximately 77% of all Fuels production in Canada and is thus in a favoured position. Coal will assume a new importance and without doubt rapid advances will be made toward gasification and other derivatives considering that the initial allotment of funds in the U.S. to "Operation Independence", the American plan for self sufficiency in energy, is in the order of 2 billion dollars. Moreover, the President stated the same comprehensive effort would be applied to the operation as was given the Space Program.

A strange parallel exists in this country between petroleum and coal exports and imports. About a million barrels of oil per day are exported from Western Canada to the U.S. and approximately the same amount is imported into Canada east of the Ottawa Valley from Venezuela and the Middle East (largely via pipeline from Portland, Me. to Montreal). Canada imports approximately 18 million tons of bituminous coal (including metallurgical coal) into Ontario from the U.S. (1970) and exported to Japan (1972) some 8 million tons of high grade metallurgical coal.

The possibilities of international power plays with this situation are obvious both from Japan and from the U.S. The implications for metallurgical coal are impossible to assess. We expect that high grade coking coal prices will continue to increase in price as we have mentioned. Price increases in "thermal" coal will have some effect in strengthening the price of coking coal, but it is not possible to say that it will be substantial.

We have been urged to study Eastern markets as a potential for the Company's coal. It should first be noted that Smoky River coal along with other sources lying on the eastern slopes of the Rockies is quite as suitable for metallurgical purposes in the eastern steel mills as that imported from United States. The problem is one of distance and transportation cost inherent in the source of production being so far from markets - a problem, it should be added, not unfamiliar to Albertans. The solution becomes one of scarcity or price: i.e. at the moment tankers are being chartered to transport western Canadian crude oil from Vancouver to Portland, Me. via the Panama Canal, a distance in excess of 7 thousand miles, thence by pipeline to Montreal.

It is interesting to note that in 1970 the average value per ton of coal produced in Canada was \$5.00; in Nova Scotia \$10.30 and in Alberta \$3.90. In that same year Alberta produced some 41% of the coal mined in Canada. Of the 18 million tons of bituminous coal imported into Ontario from the U.S., as mentioned previously, about 7.5 million tons is of metallurgical quality, the remainder being thermal coal for Ontario Hydro. Much of this is from "captive mines" but it is pointed out that all 18 million tons comes from a "foreign nation". Attention is also drawn to the fact Canada exports the same quality of metallurgical coal in Japan as it imports from the U.S. It should be pointed out that in 1972 Japan imported about 20 million tons from Australia, 17 million tons from the U.S., and 8 million from Canada. The U.S. is therefore exporting at this point in time over 24 million tons of coking coal annually.

This situation has naturally raised the question of Alberta mines

shipping to Eastern Canada. Indeed, McIntyre has already sold 2 small lots of coking coal to Eastern U.S. steel mills. An Alberta government spokesman was quoted by the press as follows: "The government has complained that U.S. railways can ship coal from Montana to Ontario for 30% less than Canadian railways charge for similar shipments between Alberta and Ontario. As a result, Ontario companies have bought Montana coal although Alberta has coal to spare and is actively seeking markets in Eastern Canada".

Your Commission has looked at this question and to the best of its knowledge no Montana coal has been sold in Ontario. A rate was requested of a U.S. railroad but no quote was given as its line was already up to capacity. Also important is the fact that Montana coal is thermal, not metallurgical. It is understood about 80,000 tons of this coal is moved over Alluez Docks, Duluth, for furtherance to Detroit Edison. Evidently it is the intention to greatly expand this tonnage. Operation Independence forbids the conversion of any further thermal electric generating plants to oil or gas. Whether reversions will be made to coal remains to be seen.

At Thunder Bay some coal rates from the west have been quoted subject to the availability of the Iron Ore Dock facility, but which has no storage area. Ontario Hydro has a small loading facility and a storage area capable of taking up to a million tons. Stockpiling would be necessary during closure of navigation on the Great Lakes. Stockpiling at the Lakehead would be necessary

Further, it should be noted the distance from Colstrip, Montana

to Duluth is 816 miles while from the mines on the eastern slope to Thunder Bay is about 1,300 miles. The U.S. haul is therefore about 37% less than the Canadian. The water haul from Duluth to Gary, Ind. is about 775 miles and that from Thunder Bay to Hamilton about 50 miles further.

In contrast to this the average rail haul of U.S. coal entering Canada is 300 to 350 miles thence by water about 100 miles to Ontario ports.

It can therefore be readily seen why the Canadian rail rate is higher. In addition, to ship via Thunder Bay it would be necessary to construct loading facilities and areas for stockpiling.

In the week of November 6th, the Ontario Minister of Transport is quoted by the press as having tabled in the Legislature a study by American consultants from Washington, D.C. on the cost of moving Alberta coal to Thunder Bay. They arrived at a rate of \$5.33 as compared to a Canadian rail quote of \$9.50, or a "mark up" of 78%. The consultants admitted their costs were, if not empirical, at least not precise. It was further reported that if the railways would not supply their costs then Alberta and Ontario would appeal to the Canadian Transport Commission. As is well known, this recourse has been available since 1967 and is spelled out in the National Transportation Act, 1966-67, Part IV, Section 45, and the Railway Act, Section 278. We are therefore unable to predict a significant market in Canada for the Company coals at current prices and current transport costs. If the U.S. were to interfere with Eastern Canada's present supply and Eastern interests were compelled to buy at increased world prices, a good prospect for Eastern sales could be seen.

There are significant advantages to a long term fixed contract based on a "cost plus" calculation. It must, of course, have adequate escalation clauses. It ensures a stability of importance to the community, and we would think, to the Company. Prudence, in your Commissioners' view, would indicate the wisdom of ensuring some base long term contract. From the Company's point of view such a contract would do little to recoup its losses. That recovery depends on obtaining a much improved market price which appears likely only from spot sales. It is apparent that in this area the interests of the Company on one hand, and the community, government and Alberta Power on the other, tend to diverge.

PART VII: The Community of Grande Cache

The new Town was established to serve the Company's coal development. The need for the Town was urgent once the long term contract was signed. Both the government and the Company were determined that it would be a well designed, attractive community that would make an attractive home for those persons engaged in the mining and related operations. Its planning and development were not carried out with any real prospect of other industry. It was necessary to have appropriate school, hospital and recreational facilities for the population.

The Town has been called an instant one. Its development was, indeed, rapid. It was built at a time when construction costs were high.

The costs of providing needed municipal services, including the servicing of development land, were paid directly by the Province of Alberta as new town advances. The costs of servicing land would, for the most part, be recovered on the sale of the land. Land, when sold, was sold at cost, and there was no contribution to meeting other municipal expenditures from land sales. The basic concept of new town development is that the province will provide the initial capital and the community will repay that capital. As its financial stability is ensured, it will usually attain town status and repay the initial expenditure under normal municipal financing. It is anticipated that a new town will be able to meet its own operating expenses.

The community's planning had as its base a community of 4,000. In laying out the Town, it was designed so its development could be phased to accommodate 5,000 people, a figure which it was felt might reasonably be reached with larger coal contracts. The Town, unfortunately, opened more lots than it had purchasers for, and has found itself with a surplus inventory of residential lots which cost \$1 million to service. That problem is not the result of a culpable error on the part of the administration. It arose partly as a result of optimism about the expected coal development and partly as a result of an error in allocating lots in each of two phases instead of consolidating the sales in one phase. The result was the servicing of both phases, even though there are many vacant lots. This capital burden weighs heavily on the community.

The second major problem affecting the community's municipal services is the heavy debt charge resulting from its providing all of its services at once, in a high cost period, to an isolated community. An indication of the comparative high cost in Grande Cache is to be drawn from the evidence of Dr. E. J. Hanson. The per capita cost of fixed municipal assets in Grande Cache is \$1,833 compared to \$720 in Fort McMurray and \$675 for all Alberta towns.

The third major problem arises as a result of the declining population. Until the closing of the Number 5 Mine, the population appeared to be at least approximating the planned figures. It declined from 3,580 in December, 1972, to about 2,500 this summer. It never reached the estimated 4,000 and the long term prospects are that it

will not substantially increase. The per capita costs, which would probably have been reasonable for a 4,000 population based on this lower population, can only be characterized as excessive.

At a population of 4,000, the community would probably have been able to achieve fiscal responsibility, although the burden of the unsold lots would be significant. At a population of 2,500, it cannot continue to meet its current obligations, much less repay capital. Some of its revenue is received from the province based on per capita grants made by the Minister of Municipal Affairs from the tax revenue of the improvement district in which the mine is situated.

The Town does not have any tax arrears. The majority of the private residential property is financed with mortgages guaranteed by the Company. We do not expect, therefore, that there will be residential tax defaults in the next 10 years or so. There could be commercial tax defaults, but the investment is sufficiently large in this sector of the Town that it is unlikely that the owners or their financiers could permit property to be lost for taxes. One must note, however, that there are a large number of vacant homes in the Town, and if there were significant tax defaults, the Town's economic situation would be very grave. An assessment of the new Town's economic position on a per capita basis commends itself.

The Town operates under the county form of government, with a Council exercising both municipal and school functions. In this respect,

the Board of Administrators exercises both functions. School capital costs were, of course, also advanced by the province. They are a charge on the local community, and under the province's Foundation Program those charges which are authorized under the program are eligible for repayment from provincial funds, regardless of the contribution made by local taxpayers under the basic tax levy charged in any given community to support that program. Certain monies were expended which were "ineligible" under the Foundation Program. These expenditures are largely attributable to high construction costs. This is not an unusual situation and no evidence was given to satisfy us that the ineligible portion of the school capital cost can be criticized as an improper or unnecessary expenditure. The school finances are in critical condition largely because of high capital cost and high interest rates. About \$546,000 of the debt is ineligible. The charges for this cost were \$62,613 in 1973. In addition, the school faces high operational expenditures which must also be partly borne by the municipal taxpayer unless special relief is given. There is no evidence that the actual expenditures can be characterized as unreasonable or improper, and it may be difficult to make any significant reduction in these charges even if there is a decline in school population. These costs are incurred in meeting necessary educational requirements for the students.

We must point out that to this point in time, no extraordinary assistance has been given to the new Town of Grande Cache by the province either in grants or special services. There appears to be such an assumption held in the province and we are anxious to make it clear that

as a municipality it cannot be said thus far to have received any special economic consideration.

The Commission instructed Dr. E. J. Hanson to review the municipal finances and make recommendations. He made a very lengthy analysis (Exhibit 39) and compared the Town with Fort McMurray, another new town based on a single industry, and the average for all Alberta towns.

A Comparative Outline of the Finances
of the Town of Grande Cache

Capital Financing

A. Capital Expenditures and Fixed Assets

The total cost of the municipal, water supply system and school fixed assets as of December 31, 1972, for the Town of Grande Cache was \$9,869,000, as compared to \$9,581,000 for the Town of Fort McMurray.

The per capita comparison is given in the following table.

Schedule 3: Per Capita Comparison of Municipal, Water Supply and School
Fixed Assets

	Grande Cache	Fort McMurray	All Alberta Towns
Municipal Fixed Assets	\$1,833	\$ 720	\$ 675
Water Supply System	\$ 359	\$ 188	\$ 170
School Fixed Assets (Per Pupil Basis)	\$2,547	\$1,347	\$1,550

B. The Sources of Capital Funds

For the period 1969-1972, Grande Cache spent \$9.9 million on fixed assets and Fort McMurray, \$4.9 million. A comparison of funding sources is given in the following table.

Schedule 4: A Comparison of Capital Funding Sources

	Grande Cache	Fort McMurray
Long Term Debt	60.8%	44.6%
Contributions, Grants, Gifts	4.8%	39.4%
Land Sales	29.2%	1.1%
Contribution from Revenue Funds	3.6%	11.5%

Municipal Operational Aspects

A. Municipal Revenue Comparisons

Provincial grants for municipal operations equalled 30.5% of total current revenue for Grande Cache, 27% for Fort McMurray and about 15% for all Alberta towns. Local taxation burdens are compared in the following table on a per capita basis.

Schedule 5: Per Capita Comparison of Local Taxation Burdens

	Grande Cache	Fort McMurray	All Alberta Towns' Average
Total Local Revenue (1972)	\$219	\$178	\$190
Property Taxation (1972)	\$137	\$133	\$142
Property Taxation (1973 Est.)	\$206	\$150	\$150

The decline in population has resulted in an estimated property taxation level in Grande Cache in 1973, that is over 1/3 above that in Fort McMurray and the Alberta towns' average.

B. Municipal Expenditure Comparisons

Total municipal operating expenditures have been relatively high in Grande Cache at 54% above the Alberta towns' average in 1971, 37% above in 1972 and an estimated 87% above for 1973. During the same period, Fort McMurray's expenditures have been close to the Alberta towns' average.

The very heavy debt charges account for almost 30% of all operating expenditures in Grande Cache in 1972, as compared to 17.4% in Fort McMurray and 13% in all Alberta towns. On a per capita basis in 1972, the debt charges in Grande Cache were more than 3 times the Alberta towns' average and over twice the Fort McMurray level. The 1973 estimates indicate these charges in Grande Cache will rise to quadruple the Alberta towns' average and almost triple the Fort McMurray figure.

School requisitions per capita in Grande Cache were in the process of achieving a level comparable to Fort McMurray and the Alberta towns in 1972. In 1973, they will be double the Fort McMurray level and an estimated 2/3 above the Alberta towns' average.

C. Municipal and Water Supply System Long Term Debt and Interest Rate Comparisons

The long term combined debt of the municipal and water supply

systems in Grande Cache on a per capita basis is currently more than 4 times the average for all Alberta towns and more than 2 1/2 times the Fort McMurray level.

Grande Cache also pays higher interest rates on its debt, 8.4% as an average for 1972, as compared to 6.4% for Fort McMurray and an estimated 6.0% for all Alberta towns.

School Operational Aspects

A. School Revenue Comparisons

A comparison of school district revenues for 1972 is given in the following table.

Schedule 6: A Comparison of School District Revenues for 1972

	Grande Cache	Fort McMurray	All Alberta Towns' Average
Local Taxation	50.4%	45.0%	25%
Provincial Contributions	44.7%	47.1%	67%
Provincial Contributions (1973 Est.)	54.9%	-----	---

Excluding the mining and industrial assessment in both towns, the local school taxes per pupil in Grande Cache are estimated to be 50% higher than the Alberta towns' average, as compared to 25% below the towns' average for Fort McMurray.

B. School Expenditure Comparisons

The total operational expenditure per pupil enrolled in the

Grande Cache School District was 22% above the Alberta towns' average in both 1971 and 1972, and in 1973, it is estimated at 55% above. Debt charges are high in Grande Cache and absorb 24.7% of the total operating expenditure for 1972, compared to 12% for all Alberta town school districts. On a per pupil basis, debt charges in Grande Cache are 2 1/2 times the Alberta towns' average for 1972.

Instructional costs in Grande Cache on a per pupil basis in 1972 were 11% below the Alberta towns' average, however these will rise with a decreased enrolment.

C. School Long Term Debt and Interest Rate Comparisons

The school long term debt per pupil in Grande Cache is more than 3 times the average for Alberta town school districts, and 4 times the level for the 2 Fort McMurray school districts.

The Grande Cache average rate of interest paid on the school debt is over 8%, as compared to about 6% for Fort McMurray and an estimated 6% for Alberta towns.

The Town's capital investment in its school system is \$2,125,738. Of this amount, \$1,579,368 is eligible under the Foundation Program for payment by the province: the balance is borne by the Town. There is an additional capital loan outstanding of \$30,000 ineligible for provincial funding.

The Town has been receiving special grants (over and above the

normal operating grants) for the school operation, in the order of \$200,000 per year.

The Province's Investment

Details of the province's investment appear in Part VIII.

The Status of the Town

The Town's current principal indebtedness to the province is \$3,962,510. It has not made, and cannot make, any payments on the principal. These are unrecovered costs of municipal expenditure, including the surplus serviced lots and municipal facilities.

The average taxes on a single family residence are around \$500-\$600. The Town has not levied business tax in 1973 because of the depressed economic conditions.

We see no justification for any change in the form of government of the new Town. The major role of the province necessitates its presence. A community in a state of flux does not have the people available to justify separation.

The new Town Board suggested that it could handle its finances if relief were obtained by the province buying the inventory of unsold land. In our view, this would be inadequate assistance.

Dr. Hanson recommended supporting the community to ensure the burden on the community was not significantly greater than that borne by other towns, with some special assistance for education. This Town has superior amenities to many towns; it is however, isolated, single industry dependent and purely a creation of the province and its policy of resource development.

Strengthening the Viability of the Town

Your Commissioners have anxiously considered all of the proposals and suggestions made for strengthening the viability of the community. Apart from direct provincial assistance, the only means of strengthening the viability of the community is to broaden the base upon which it was founded. That base was and is the coal industry. Suggestions of other potential industries which appeared in pronouncements relating to the development and prospects of the community were not founded on any feasibility studies so far as we can determine.

We are satisfied that every effort must be made by the community and the government to encourage development of other industry which could help to bring the Town's population closer to the 4,000 population on which its development was predicated. The addition of other economic bases would also ameliorate other social problems that develop in a town devoted to a single industry. It is clear that the development of other industry will require some promotion by the Town and the government. Co-ordination between the Town, its business people, the government departments and probably the Company suggests itself as necessary.

Your Commissioners were presented with a number of suggestions as to potential new development. None were presented with sufficient depth to enable the Commission to make any recommendations. There are, however, certain areas which possess potential and merit study with a view to implementation. Provincial and federal assistance may be available to prospective industries in this, as in other communities. The community should qualify for Federal Department of Regional Economic Expansion assistance. No one has attempted to make a case for special provincial assistance to any commercial development. There is a real risk of falling prey to the suggestion that special economic aid is needed to reduce the demands on the province. We believe that the saving to the province must be demonstrated in economic terms to justify the province offering economic assistance. This is not to say that the province should be slow to make available the usual assistance, indeed, they should take steps to ensure that the availability of economic assistance for development in this community does become known.

We turn now to consider some of the general proposals put to us.

TOURISM: The scenic nature of the area, the existence of good modern facilities, the increasing demand for recreational areas, make this a natural consideration. Almost nothing has been done to promote tourism. The failure to promote tourism has not been without reason. The road from Hinton to Grande Cache is not suitable for the bulk of potential tourists. Facilities, while attractive for a residential community, were not designed or constructed as they would be for a resort centre. There is little

provided now in the area for tourist activities such as camping, trail riding or hiking.

It has been suggested to us that Grande Cache has the potential of Banff or Jasper. We disagree with this assessment. We are satisfied its potential, at least in the foreseeable future, lies in less intensive recreational use. It is a gateway to Willmore Wilderness Park. It can be a service centre for activities which are classed as wilderness endeavours, particularly hiking, trail or pack riding, game hunting or nature watching. Development of these kinds of activities should be fostered and encouraged. This area could be given priority in planning the kinds of developments that will now be placed in wilderness areas, e.g., developed campsites, trails or secondary roads.

It appears to your Commissioners that there is little co-ordinated provision of these kinds of services. Two divisions of the Department of Lands and Forests as well as the Department of Highways and Transport and the Town of Grande Cache are involved in providing some facilities. Travel Alberta seems to have a very small role to play. This situation appears to us to be likely to hamper development of the required amenities. There should be comprehensive planning based on a study of needs and demands. There must also be promotion of the attractions of the region.

A hard surfaced road would be necessary to ensure bringing any significant number of tourists to Grande Cache as a destination. We have been strongly urged to recommend that the proposed Highway 40

between Highway 16 and Grande Prairie be routed through the Town to provide that access and to provide the Town with incidental business for travellers using the highway.

It is clear to us that the establishment of a hard surfaced highway between the Hinton area of Highway 16 and the Grande Prairie region is established government policy subject to priorities that may be given in highway construction. The commitment is confirmed in a letter to Procter and Gamble Ltd. from Premier Strom, dated November 3, 1970, to assess the need for this road in relation to other highway needs. Your Commissioners are, however, satisfied that the need for hard surfacing of the existing highway to Grande Cache is a pressing one and essential to any meaningful tourist promotion. A good highway connection between Grande Cache and Grande Prairie is also highly desirable for access to Grande Prairie.

A much more difficult problem is posed in the suggestion that the highway from Highway 16 to Grande Prairie must pass through Grande Cache. A detailed feasibility study has been prepared by the Department of Highways and Transport. No one who appeared before us was able to challenge that department's economic assessments. The department's choice narrowed itself to two routes, the easterly, which would continue north from the existing Highway 40, and the westerly, which would continue along that highway through Grande Cache then north. These routes are illustrated on the map, Appendix 8, on which the easterly route is number 1, the westerly, number 3.

We are satisfied that there has never been any government commitment to route the highway through Grande Cache. The alternatives must be viewed on the merits.

Route 1 from the Muskeg Corner to Grande Prairie is 90 miles in length. Route 3 starts at the Grande Cache minesite and is 102 miles long. The overall travelling distance between Grande Prairie and Highway 16 is 43 miles shorter by Route 1 than it is by Route 3. The distance from Grande Cache to Grande Prairie would be 115 miles by Route 1 and 121 miles by Route 3.

It should be noted that both plans contemplate hard surfacing the existing highway to Grande Cache, but if Route 1 were adopted, this road would be a stub road of 23 miles in length, which will cost approximately \$1.6 million.

The department estimates that it would cost \$7 million more to adopt Route 3 through Grande Cache (\$27.2 million for Route 3, \$20.2 million for Route 1). The department indicates that the construction on Route 3 is more difficult and that the highway will not enjoy the same standard of construction as Route 1. The annual maintenance costs would be about \$49,000 more per annum for Route 3 over Route 1 (\$229,000 as against \$180,000). Because of the increased length and the slightly inferior quality of the road, maintenance costs will be higher on Route 3 than on Route 1. Travellers would spend more time and incur marginally increased costs on Route 3.

Route 3 would route all traffic through Grande Cache: a potential benefit for businesses which serve the traveller. The route is more scenic coming further into the foothills and it appears slightly more in keeping with the policy of providing a tourist road through the eastern slopes. Route 3 would open up slightly more area than Route 1, but the potential of the opened up area is largely for light density recreational traffic which might be carried on much less costly secondary roads. The Kakwa area is considered to have significant tourist potential, but would not be benefited by the choice of Route 3. Moreover, this highway is intended to provide access to Highway 16 from the Peace River country as well as to serve tourists and the interest must be balanced.

It is not usual to justify highways on economic grounds. We, however, assess the relative routes for the highway in economic terms. The only significant advantage of Route 3 over Route 1 is the effect it may have on Grande Cache's tourist potential. Evidence placed before us indicates that in assessing tourism potential created by a highway that the assessment should be done on the region served by that highway rather than on a particular location within the region. In the case of Grande Cache, the indication is that if a highway from Grande Prairie to Grande Cache is built, that the same general benefits to the region will occur regardless of the routing of that highway. If the highway is placed through Grande Cache, however, a greater portion of the regional benefits will accrue to the Town than would otherwise be the case. In other words, building the highway through Grande Cache at an additional cost of \$7 million would simply result in redistribution of a portion of

the overall benefits from the region to the Town. Your Commissioners are of the opinion that the returns from incidental business will be very small. We recognize the fact that some business would be generated by putting the highway through the Town, that it would assist the promotion of "circle tour" travel: but the returns would not justify the expenditure. It must be characterized as a further \$7 million grant to the community which has little prospect of an economic return to justify it. Seven million dollars is a very substantial contribution; it would be sufficient to discharge the Town's municipal debt and that would be of demonstrably greater benefit.

It is also the Commission's belief that if Grande Cache can develop as a tourist destination, or as a servicing centre to the surrounding area, that the fact that it is a short distance from Highway 40 will be no deterrent if it is served by a good paved road. The more that the Town is able to become such a destination, the less will be that deterrent. If the Town is unable to develop that attraction, a highway routing through it would only serve to attract incidental business the return from which would not justify the expenditure.

We recognize some other arguments. It can be argued that large expenditures on transportation facilities should, in principle, be utilized to give access to more areas. It might also be urged that truck traffic which would compete with the A.R.R. should not be encouraged. It appears to us, however, that the decision to link Highway 16 and Grande Prairie was made with knowledge of the A.R.R. and must have assumed

the railway would not compete with commercial trucking.

A serious problem is the possibility of a small tourist centre developing in the Muskeg area, fragmenting business. It appears to your Commissioners this should be discouraged and facilities which compete with those available in Grande Cache should not be permitted on the new highway unless necessary to meet the needs of the traveller.

PROPOSED YOUTH HOSTEL: It is proposed that a youth hostel be built in Grande Cache. Comprehensive plans for the development of a string of such hostels along the eastern slopes were presented to those hearings. Your Commissioners believe that this development would be compatible with the type of tourist industry that may reasonably be expected to develop. The project should be encouraged. Your Commissioners are reluctant to comment on the wisdom of financial contribution, in view of the fact that it is part of a larger program and one which may have several bases for support. We are unable to see sufficient economic advantage to recognize a substantial contribution in the interest of Grande Cache alone, although it is recognized that the benefit will be both direct and indirect through the promotion of the region as an attractive place for tourists.

WILLMORE WILDERNESS PARK: Grande Cache should be accepted as the "gateway" to that park. Your Commissioners do not consider it within the terms of reference to question the concept of the Wilderness Park and therefore do not comment on the prospects for changing that

concept. The Town does have the facilities to serve as a centre for access into the park, and that use should be assured in the course of the development of access.

GUIDING AND OUTFITTING: Your Commissioners believe that with proper development, guiding and outfitting could play a much larger role in providing a basic livelihood for substantial numbers of native families in the Grande Cache area. These pursuits are in line with their traditional lifestyle and would complement the growth of an overall tourist industry in this area.

Evidence presented to us indicated that a large number of outside guides and outfitters presently operate in the adjacent region to Grande Cache. Some of these outfitters do apparently occasionally employ local native residents as guides. Outfitting by the native people themselves has not been carried out, however, in an organized manner that would maximize their economic return from the exploitation of this resource.

A detailed and comprehensive review and assessment should be carried out by the Department of Lands and Forests to determine the most effective way in which the outfitting industry in this area could be developed for the benefit of the native residents. Consideration should be given to making the area an "outfitting area" closed to those non-residents of Alberta without guides, particularly if this policy should be applied elsewhere in the province.

Following this, steps should then be taken to introduce outside expertise who, in co-operation with the Native Area Development Committee, would provide continuing advice and guidance over a considerable period of time to upgrade the managerial skills, equipment and facilities of those native persons who have indicated an interest in as well as demonstrated ability in this vocation.

FORESTRY: There is a significant stand of timber, largely to the east of Grande Cache. The areas to the north and south are largely committed to pulp operations at Hinton and Grande Prairie. There is no prospect for pulp operations centred in Grande Cache.

There are, however, reasonable prospects for small lumber mills or more specialized operations in the nature of stud mills. A small logging operation has been conducted recently in the area. It has the important added advantage of providing employment for native peoples, who generally prefer this work over work in the mining industry or the alternative of welfare.

The Department of Lands and Forests is cognizant of the present operations and is studying other prospects. This study should be given priority and a decision taken promptly. The operation should, if possible, be centred near Grande Cache. Nothing should be done to encourage the development of facilities which are already provided at Grande Cache.

PROPOSED FISH HATCHERY: Little concrete information was put

before your Commissioners with respect to this proposal. Complementary industries such as this must be encouraged and their proposals expedited. A case for special financial assistance from the province is not, however, made out.

NATIVE DEVELOPMENT: The Native Area Development Committee presented your Commissioners with impressive evidence as to their desires to achieve a self sufficient accommodation with the community. They are anxious to establish viable operations of their own and have some prospects in the provision of market gardens, small scale farming operations, the raising of horses and "outfitting," "home craft" operations and related activities. They have asked for modest financial assistance to initiate projects and provide education and expertise. They have received such help in the past, but it is not assured. They do not seek indefinite help but would like assurance of assistance for a reasonable period, say 5 years. The province has a moral obligation to assist the persons who have been displaced by the development of the Town and the mine and the establishment of these ventures will redound to the benefit of the Town.

OTHER INDUSTRY: We have no evidence to support a conclusion that there are other industries capable of introduction into the community. The presence of the fine physical facilities available in the Town might prove attractive to other businesses. It is possible that the facilities could attract small meetings such as those that use the facilities of the Banff School of Fine Arts. The promotion of the

area's physical amenities in an attractive setting may attract uses which have not been suggested to your Commissioners. Consideration might be given to placing small government or university research centres in the area. We have carefully considered the prospects for industries which could be especially attracted to the locality and apart from tourism, forestry, mining and mining related enterprises, there seems little present prospect for commercial development. There is no suggestion of any other mining development in the vicinity.

PART VIII: The Province's Investment and Obligations

The province has made a substantial investment in the development of the coal fields at Grande Cache. Your Commissioners, except where otherwise indicated, consider the following investment to be attributable to the coal development, that is, money that would not have otherwise been spent in the area. The costs are taken to the end of the 1973 fiscal period where available, other expenditures are classed as future expenditures. We have not been asked to determine, nor would it be an easy task to attempt, the returns the province has received. It receives a royalty of \$0.10 per ton on coal shipped, as well as lease and surface rentals. It also receives tax revenues from the income earned by those who were suppliers of labour or materials to the construction of the Town and the minesite. The province further obtains revenues from licenses and taxes. The monies it has invested might, of course, have been invested elsewhere and contributed to the yield of revenue.

It is apparent that continued expenditures will be necessary to ensure that the facilities provided can be operated. It does not appear that any significant curtailment of future expenditure can be achieved for the life of the mine.

The highway from Hinton to the west side of the Smoky River was made necessary by the proposed development. The portion from Hinton to Muskeg Corner probably would have been built, but its building was accelerated. The total cost was \$9,766,000. It is fair to estimate that \$2,441,500 was attributable solely to the development of Grande Cache.

In the period 1969 to 1972 maintenance totalled \$520,000 of which virtually all can be attributed solely to the development.

Future maintenance will be in the order of \$110,000 to \$140,000 per year, of which \$27,500 to \$35,000 can be attributed solely to the development, once the highway is continued north from Muskeg Corner to the Grande Prairie area.

The estimated cost, of paving the highway from Hinton to the west side of the Smoky River is approximately \$6,000,000 of which \$1,600,000 will be attributable solely to the development.

Department of Public Works

The capital invested in provincial facilities in Grande Cache is \$1,129,900. The facilities have cost \$120,800 to operate. The province has made grants in lieu of taxes totalling approximately \$58,000.

Proposed capital expenditures are \$2,100 and the estimated ongoing operating costs are in the order of \$50,000 per annum, with grants in lieu of taxes \$23,000 but escalating.

Alberta Hospital Services Commission

The capital investment in the hospital (after allowing for the Company's contribution) is \$833,400. The operating costs to date are \$717,400.

Projected future expenditures for operating the facility are calculated to be \$260,000 per annum.

Alberta Housing Corporation

This Corporation constructed 13 single family residences primarily for government employees. Provincially employed tenants receive some subsidy. This subsidy is currently under review. The capital cost was \$357,000.

The Corporation also built 3 four-plexes and one 12-suite apartment for the Town and these are rented to the Town at a rate that will amortize the investment in 20 years. The capital investment is approximately \$400,000.

The Corporation also made a loan to a private developer for a 24-suite unit in the amount of \$289,000.

The total investment was made to assist in the provision of needed housing when other facilities or other sources of funds were not readily available.

Department of Lands and Forests

Ranger station and office -	\$ 92,000
Fire guard -	31,000
Suza Creek (siding facilities) -	28,000
Land grant to displaced natives (Nominal figure @ \$20/acre) -	83,000

Surveying native land -	30,000
	\$264,000.

These costs are all attributable to the development.

The expenditures to date for operating Fish and Wildlife and Lands and Forests facilities are \$92,400, all of which can be attributed to the development.

Future expenditures are estimated at \$56,000 per annum. The department is also obligated to fence the native land grants: firm estimates are not available. It should be noted that some of the services provided by this department would have been provided to the area without the development. The services would have been staffed from other centres and it is not possible to make any realistic allowance for the part not attributable solely to the development.

Alberta Government Telephones

The capital investment is \$1,670,000. Costs of salaries to date are approximately \$108,000. The accounting system of A.G.T. does not enable the breaking out of maintenance and incidental costs, nor does it apportion the revenue to enable us to give a net figure.

Future expenses can be estimated to continue in the range of \$36,000 per annum for staff salaries alone.

Department of Education

The department's capital expenditure to date is \$1,667,700. This includes the portion of the school facility supported by the Foundation Program.

It has made, or will make, special grants to the end of 1973, in the amount of \$1,315,000. It also has expended \$317,300 on a program for the training of miners.

Based on past expenditures, special grants of \$200,000 per annum can be expected.

Department of Health and Social Development

This department's expenditures are as follows:

Est. grants Edson Health Unit (pro rata for Grande Cache) -	\$ 27,567
Special grant -	10,000
Preventive Social Services -	49,000
Parent Child Development -	22,000
Leadership Training -	14,000
Public Assistance -	81,000
Regional Office Operations (approx.)	74,000
	\$228,567

The department has not made, and anticipates no capital expenditures.

Its estimated future costs are as follows: (Pro-rated figures per annum)

Edson Health Unit -	\$ 32,435
Preventive Social Services -	22,000
Leadership Training -	14,000
Community Development - Volunteer Services -	1,000
Public Assistance -	52,000
Regional Office Operations -	20,000
	\$141,435

Department of Culture, Youth and Recreation

This department has paid \$15,700 toward costs in the recreation centre. No future expenditures are budgeted.

Summary

The province's capital investment (apart from its New Town advances) can be summarized as follows:

Capital Expenditure to date:	
\$16,393,100 less \$7,329,500 for the Hinton-Muskeg portion of the highway:	\$9,063,600
Operation Expenditures to date:	3,210,300
Projected Capital Expenditures, \$6,020,100 less \$4,500,000 for the Hinton-Muskeg portion of the highway:	1,520,100
Projected annual expenditure, per annum \$934,945 less \$93,750 for the Hinton- Muskeg portion of the highway:	841,200

These figures do not include any special relief for the new Town such as was recommended to the Commission. The province's ongoing expenditures are, in your Commissioners' view, ongoing moral commitments to the Town. Having established and promoted the community and its facilities, the province cannot now stop operating the facilities and services.

Public Utilities Investments

Alberta Power Ltd. has constructed the H.R. Milner Power Plant and facilities related to it, - transmission and supply lines and staff facilities. This plant would have been built, but elsewhere, and at less cost. The higher cost was to be offset by the low cost fuel. This is a capital investment which Alberta Power expects to incorporate into its rate base. The investment of the consumers in this plant is 42 million dollars. If the plant is able to operate at its planned capacity, its cost will be amortized from revenue; if it is not able to so operate the cost will have to be absorbed by consumers of power generated elsewhere. On the evidence before us the Company's production is not sufficient to meet its contracted commitment to Alberta Power Ltd. unless it diverts higher quality coal.

Northwestern Utilities constructed a gas supply line which serves the power plant, the minesite and the Town's gas franchises. This is also an investment which will be borne by utility consumers in the amount of \$6,000,000.

The Alberta Resources Railway Investment

The investment in the Alberta Resources Railway, now in the order of \$130,000,000 has been excluded on the grounds that the evidence before us establishes that its construction was not affected solely, or even primarily, for the coal development. It is unlikely that the railway would have then proceeded without the optimism, almost euphoria, produced by the coal prospects. It is, however, impossible to attribute the capital expenditure and its resultant losses to the coal development and any apportionment would be most arbitrary. The ongoing costs of the railway, are of course its interest burden, and its revenue has been diminished by the reduction accorded the coal traffic.

The Federal Government Investment

There is a direct federal government investment in services it provided in relation to securing, training and locating miners, and relocating miners on the closure of the Number 5 Mine. This investment appears to be as follows:

Moving workers into Grande Cache -	\$169,500
Moving workers out of Grande Cache -	105,500
Movement to training courses -	5,000
Miner training program, salary subsidy -	130,770
Homeowner allowance (estimated)-	100,000
Training in industry allowance -	20,000
A.V.C. contribution -	34,618
	\$565,388

A number of departmental programs were employed in the attempt to acquire and develop a competent labour force for the Company. The Federal Department of Manpower assisted in overseas recruiting by providing facilities for the Company's recruiters but the department did not assist in paying the removal expenses of those eventually hired.

Part IX: Conclusions and Recommendations

In this section, your Commissioners have attempted to bring forward their major conclusions and set out their recommendations.

We conclude that the government has made no commitments or representations which impose an obligation upon the province other than the implicit representation that it will continue to support the community. The amount of that support is outlined in the preceding section. There is a commitment to build a highway from Highway 16 to Grande Prairie, but that was not contingent on the development of the Town or mine.

We make no finding that any employee's contract was for a period of 15 years. There is litigation pending relating to such allegations. There were no general undertakings of this nature, but the length of the Japanese coal contract was certainly held out to the employees recruited for underground mining. We later make recommendations with respect to continued underground mining.

In recruiting its employees, the Company undertook to provide for the repurchase of houses on certain conditions. We find that this obligation now rests with Smoky River Investments Ltd., which lacks assets to ensure the obligations can be met. They may, indeed be met, and we do not suggest any impropriety. However, we recommend that steps be taken to ensure that obligation to buy back employee houses be guaranteed or assured by the Company.

The Company is labouring under a heavy debt burden which adversely affects the economics of its operation. This is compounded by the burden of losses it has sustained and by the need for further capital. We are of the opinion that the operation is viable to and including the mid term (5-10 year) operation. We believe the community can be fairly secure in this expectation and has a reasonable expectation of continued operation beyond that point. We later recommend steps to ensure this operation.

The initial contract was negotiated between the Company and a single representative of the buyers. In other words, the sellers negotiate separately with a cartel of buyers. With the Company on a short term market, and other companies perhaps attaining similar status, there is a real risk now as there was a risk at negotiation, of one seller being played off against another. We do not say this happened, but the situation was ripe for such a development. Indeed, the Japanese buyers have displayed a willingness to review the prices and have allowed significant price increases. In our view, this marketing situation is most unsatisfactory. Of course, any collusion between the sellers runs the risk of being challenged under our anti-combines laws, laws not applicable to the buyers. There is a vehicle in the Coal Association of Canada which might be utilized as a single bargaining agent. Other agencies might be appropriate. We recommend that the provincial government take steps to secure appropriate dispensation from the federal authorities to permit the coal producers to co-operate (if they wish to do so) in negotiations with cartels and that the province assist in co-ordinating these negotiations. If federal co-operation were not forthcoming, the

province could, as a last resort, canvass the possibility of a marketing board, which would not be subject to the anti-combines legislation.

We find that the Company's decision to begin the development of its coal properties on a comparatively large scale, and its commitment to the initial contract, was the result of over-confidence outweighing prudence. The Company lacked internal expertise and failed to give a proper assessment to the perils which the successful execution of the contract had to overcome. The demanding commitments of this contract caused heavy pressures on the operating staff and work force.

It is also clear that a resource exploitation of such magnitude necessarily involves the government as a participant in the venture: whether recognized or not. The province not only has an interest in the efficient mining of the resource, and its conservation, but it has a major capital investment in providing the means for exploitation. It also has an interest in protecting the welfare of the members of the community who may otherwise become, in whole or in part, a charge upon the state. This venture was not one which either the Company or the province could regard as solely the responsibility of the Company. The latter has a large investment and the interests of its shareholders to protect, but it cannot be said that its responsibility is solely to the shareholders.

Your Commissioners recognize the value to be obtained by having industry accept the risks of resource exploitation. In this case, however, the risk was clearly shared with the province, and this fact, in our view,

justifies more extensive intervention than might otherwise be suggested. The direct government investment to date is almost \$16 million. Its annual expenditure will be over \$900,000 per year without any extraordinary payments to the community. The projected direct capital expenditures are another \$1.5 million. The Company's investment is over \$100 million. The indirect investment in the area (not solely attributable to the mine operation) is \$8 million on highways and \$130 million on the Alberta Resources Railway. There are investments in homes and businesses in Grande Cache. Another \$48 million is invested on behalf of the consumers of gas and power. The total direct and indirect investment by private enterprises and the government is close to a quarter of a billion dollars. This fact clearly justifies government concern and government intervention.

The Province of Alberta agreed to participate in this venture without any realistic or independent investigation of its economic feasibility. They relied upon the expertise of the Company. It would be difficult to criticize that reliance, but with the benefit of hindsight, your Commissioners recommend that: Whenever the exploitation of a mineral resource is to be undertaken by a program which involves financial commitments by the state, the government should undertake an independent investigation of the feasibility of the project having regard to the extent of government involvement whether as a resource owner or investor. Provincial resources ought not to be committed without such an investigation.

The initial planning of the Town was predicated on certain predictions as to the labour force and upon an underground mining operation.

The changes that have been made in the mining operation jeopardize the stability of the Town. No real assessment of the prospects of other industries was made. Certain risks are inherent in any development of this type. The province should, perhaps, have realized the risk. A clear solution to such a problem is to require the company to provide all the facilities. This reincarnation of the company town would, in our view, be extremely unwise, but the assumption of some of the financial risk of building the town by the company might not be. If the province had appreciated the extent of this risk, it most probably would not have developed the extensive permanent town it has established. No appraisal of the economic benefit to the province was attempted. A precise appraisal is not possible, but some attempt to determine the economic consequences to the community, if the enterprise were to fail, should be undertaken in such cases. Again, we admit the benefit of hindsight. A study might have indicated this was a reasonable risk to take; it might have indicated that the developer should support the Town, in whole or in part. No study was made. We recommend that, in the future, the province make an assessment of the projected benefits and costs to the state, and consider the extent to which an assurance from the developer is warranted before provincial funds are committed.

We find the abrupt decision to close the Number 5 Mine was taken without consultation with the Company's operating personnel, the union or the government. The province's interest in the operation was far too significant for it to be ignored. It should have been consulted so that its concerns could have been taken into consideration.

The closure of the Number 5 Mine was not in the best interests of the Company or its unacknowledged partner, the Province of Alberta. We recommend that the powers in The Coal Conservation Act to require approval or consent to closures be implemented and that the Board, in considering the desirability of closure of a mine, may have regard to the interests of the community as well as to considerations of economy, conservation and safety, and that the bonds and leases be conditioned upon observance of the requirements of that Act.

Continued underground mining is needed to ensure that the labour skills and training are not wasted. The Company has indicated its firm intention to ensure certain production from underground mines. Men were recruited, trained, imported, to do this work. The community was built to accommodate them. Government funds were used for these purposes. We recommend that the Company be obliged, either as a condition of the renewal of the leases, or as a condition of further development permits, to undertake to continue underground mining to a proportion fixed by the Energy Resources Conservation Board, and it appears to us that sufficient coal should be mined to ensure the continued employment of the present underground staff. Consideration may be given to having this obligation secured by bond.

It is the economic interest of the government to ensure that mining operations at a substantial level be maintained. Such operations would, in our opinion, be viable. We recommend that the government assure the community that it will, if necessary, take steps to ensure the mine's

operation for at least 10 years and that it will make its best efforts to ensure exploitation considerably beyond that period through the replacement of the existing lessee if it fails to efficiently exploit the resource. If necessary, renewals of leases or permission to open up mines may be made conditional upon the Company's agreeing to surrender its leases if it ceases exploitation, and to sell its physical assets at a reasonable sum having regard to the depreciated cost and the value to the purchaser.

We find a moral obligation on the province to ensure the continued support of the community. We further find that the New Town of Grande Cache is unable to meet its municipal and school obligations and will be in need of special assistance. The problem is gravely aggravated by the declining population which results in decreased revenue where there are per capita payments as in the transfers of tax revenue from the surrounding improvement district and educational grants. We find that the debt burden is beyond the capacity of the community. We recommend that the province assume the new Town's inventory of unsold land, as requested by the Board of Administrators.

This will not sufficiently reduce the disproportionate burden on the small population. We recommend that the government reduce the debt burden on Grande Cache to a point where the average local per capita taxation is equal to the average local per capita taxation of all Alberta towns. This would be an annual adjustment and leave the per capita debt at about twice the level of Alberta towns.

We recommend that the province continue to fund its activities incidental to the maintenance of the New Town of Grande Cache for so long as the mines operate. This now involves an estimated annual expenditure of \$900,000 per annum (including the \$200,000 Department of Education grant referred to in the next paragraph).

The quality of education cannot be permitted to lag and school assistance is needed. It is recommended that the province pay the annual reimbursement necessary to meet debt charges (principal and interest) on the ineligible portion of the debt until the population reaches 4,000. This will necessitate expenditure of \$63,000 per annum. At present, the Town cannot fulfill essential educational requirements within the allowed operational costs. The budget is subject to the Provincial Department of Education scrutiny. It is recommended that the Department of Education continue to make grants to meet the necessary budget requirements of the school system without supplementary requisition on the taxpayers. This amounts to a figure in the order of \$200,000 per annum, which is included in the \$900,000 referred to in the last paragraph.

Your Commissioners find the form of local government suitable. We recommend that there be no change in the form of government of the community unless and until it has achieved a population which obviates the necessity for special assistance from the province.

It is obviously desirable to take all reasonable steps to

increase the Town's population. Increased mining activity is one possibility. However, strip or surface and hydraulic mining are not as labour intensive as conventional underground operations and the work force for surface mining is more portable. The Company proposes encouraging home ownership and has an economic interest in doing so and expects the policy to be actively pursued.

Only two other industries appear to have any prospect of significant success - tourism and forestry. We recommend that the province undertake the promotion of the area for tourists and the development of facilities amenable to the development of wilderness areas. The Department of Lands and Forests should undertake the provision of facilities consistent with the planning for the general area and Willmore Wilderness Park in particular. It might be advisable to structure a special committee including representatives of Lands and Forests, Highways and Transport, Travel Alberta and the community to ensure that the activities are co-ordinated and that one department be given primary responsibility.

We also recommend that the government undertake promotion of amenities situated in the area with a view to exposing its possibilities as a centre for seminars, small conventions or for moderate research facilities.

We consider the plan to hard surface the road to Grande Cache necessary in order to permit the development of even a moderate tourist industry or to attract other businesses. We recommend that the highway

from Hinton to Grande Cache be hard surfaced and maintained as a highway.

We find that there is a commitment to build a major arterial road from Highway 16 near Hinton to Grande Prairie. The evidence establishes that it would cost \$7 million more to route that highway through Grande Cache and that the route would be longer and the engineering of slightly inferior quality. We cannot recommend the routing of the proposed Highway 40 through Grande Cache.

We recommend that the development of tourist facilities along the new Highway 40 be restricted so that any duplication of facilities available at Grande Cache be allowed only where strictly necessary to meet the needs of the traveller and that Grande Cache be designated as the service centre for the highway. In particular, we suggest that the only permitted commercial facilities be a service station or service stations and then only if considered necessary.

We recommend that the Department of Lands and Forests take immediate steps to ensure the exploitation of the forest resources, such exploitation to be conditional upon the operations being centred at or near Grande Cache.

The exploitation of the mineral resources and development of the railway necessitated the displacement of native peoples. Their self sufficiency is a direct benefit to the community. Your Commissioners recommend that the Native Area Development Committee be assured of

reasonable grants in the order of \$50,000 per annum for a period of 5 years.

There appears to us to be a need for a realistic assessment of the coal reserves. There is also need for an appreciation and recognition of the very great difference between *in place* and economically recoverable reserves. Some steps are already being taken by the Canadian Geological Survey, the Mining Research Centre and the Energy Resources Conservation Board to classify and catalogue coal reserves. We recommend that the province encourage all efforts to develop a register of reserves, subject to periodic review, having regard to physical and economic constraints, as a necessary feature of rational resource development.

Development of a register of reserves with information about their mineability will necessitate the recording of geological data relating to the mineral deposits. Exploration programs and active mining operations are prime sources of such data. The Company encountered considerable difficulty in its underground mining operations. Some of that difficulty might have been anticipated from conditions elsewhere. It appears to your Commissioners that the collection of geological information such as drill hole logs and sample analysis studies should be undertaken by the Energy Resources Conservation Board. We are cognizant that confidentiality must be respected and that experience in oil and gas reporting is not necessarily transferable. Long range planning is important and the state has an interest in seeing that exploration is orderly and economic. We recommend that the Energy Resources Conservation Board be empowered to

collect geological data from all mining operations and that the information be available to the Board for its functions, but that confidential information be kept confidential for a reasonable time from third parties. This information would be available for the province's independent studies.

A major problem in the continuing operation of the Company's mines has been the unavailability of sufficient long range planning expertise. We are of the view that mining plans must be made to ensure orderly long term development. The government involvement, at least in the case of the Company operations, cannot be restricted to approval of proposed mining operations: it must be given and kept informed of long range plans. We recommend that the Energy Resources Conservation Board be empowered under The Coal Conservation Act to require the Company to keep it fully informed of its plans for the exploitation of all the reserves within its leases. We also consider it necessary that the Board be given the resources to ensure a meaningful examination of the long range plans as they develop and are of the view that the attainment of this objective might reasonably be assisted by the retention of experienced international consultants of the status of Mr. Wardell and Mr. Boyd. We recommend that the Board be empowered and given the resources to investigate the long range plans for the area.

It is apparent that technological improvements are necessary for the proper exploitation of the Company's coal holdings. Any such development would be of value to other operators in the Rockies. Research is now undertaken by the Federal Mining Research Centre. It is recommended

that the province encourage technological research for the benefit of all operators; and that it encourage the operators to co-operate in technological research, particularly the mining of the steeply pitched seam areas.

Continuous reviews of world coal demands and world markets are necessary in order that the province may pass judgment on proposals for coal exploitation that are made to it from time to time. The economic feasibility of an operation is a matter of public concern and to that end, we recommend that the Energy Resources Conservation Board continue to keep apprised of demands and markets and to investigate the economic feasibility of proposals to open any new mine within the province with reference to its studies, as well as those of any applicant.

The Energy Resources Conservation Board should encourage and participate in studies for the development of coal potential being carried out by such institutes as the Federal Mining Research Centre, the Research Council and the Universities. We recommend that the Board be authorized and empowered to participate in studies for the development of coal potential.

It is apparent that conservation constraints play an insignificant role in coal mining up to this time. In the case of the Company, we are faced with an existing operation which now simply cannot be shut down: the mining operations must be viewed in the light of present economic conditions. In the case of proposals for future exploitation, the long run prospects can be given proper weight. The principle of The Coal Conservation Act is sound and needs implementation. It may be necessary to delay exploitation

until costs or technological improvements ensure greater recovery. It appears to us that the cost of delay in new areas which cannot now be efficiently mined will ultimately be repaid by escalating prices founded on escalating demand. We recommend the immediate implementation of The Coal Conservation Act in relation to existing and new mines, with a view to maximum utilization of the resource. The onus of establishing that a given seam or part of a seam influenced by mining operations is not economically workable must be placed on the lessee.

The coal leases acquired by the Company in September, 1968, were obtained in order to satisfy the buyers under the long term coal contract, and were issued subject to proof of that contract. The contract has now been abrogated. It is, in our view, open to the government to recall these leases, at least to the extent of subjecting them to new conditions, such as royalty, underground mining, new conservation requirements. It is arguable they could be cancelled, but they have become a part of the Company's planning. We recommend that the September, 1968, leases, Numbers 6599 to 6613, be made subject to any conditions that the government sees fit to impose on new operations, so that they are not taken as being subject to vested contractual rights.

The royalty return on coal of the market value of the Company coal is almost insignificant. We are in no position to make recommendations as to quantum of royalty, but we are satisfied that the royalty rate must be reviewed. It bears no relationship to price. We are cognizant of the fact that developments have been based on the existing royalty and the leases

are contractual. The leases are, however, subject to renewal on conditions. If the province is to realize on its investment, a realistic return is desirable. We recommend that the province undertake a review of coal royalty with a view to relating metallurgical coal royalty to the value of the commodity.

Alberta Power obtains reject coal, without royalty, justified on the basis that the product would be waste otherwise. On a true royalty basis, this may not be a significant amount of money, but it appears to us, in principle, that the province should receive a royalty on a resource commodity which is used. Again, both the Company and Alberta Power may have contracted on the basis no royalty was charged and the economics of this relationship might militate against a full royalty. However, no assurance or undertaking was given by the province to waive the royalty. We recommend that the province give consideration to applying a royalty to the sale of coal products to Alberta Power Ltd.

The contract negotiations between the C.N.R. and A.R.R. have previously been conducted by the government without the involvement of the A.R.R. We recommend that in the future, negotiations should be carried out with the involvement of the A.R.R.

The Alberta Resources Railway has been operated at a subsidy to the coal exploitation. We are satisfied that there is no justification for such a subsidy. The reduction in freight rates was for a contract which has since been abrogated. The Company has, however, negotiated its present

two year contract on the strength of this waiver. Your Commissioners do not feel it advisable to change the costs during the term of this contract. We recommend that the Law Officers of the Crown review the commitment given by the Government of Alberta to reduce its rate of rental payable by the C.N.R. to the A.R.R., with a view to reinstating the original rental figure of \$1.40 per ton. Unless a new special case can be made out, the \$1.40 rate should be reinstated. We would recommend that such reinstatement not apply to the present two year contract which expires in 1975.

The present C.N.R. - Company contract provides for payments in the event of shortfall to the C.N.R. No part of this penalty now accrues to the A.R.R. The C.N.R. contract with the Company also has an escalation clause. We recommend that in future C.N.R. - A.R.R. negotiations, both aspects of shortfall and escalation be subjects for negotiation.

The problem of supplying adequate coal to Alberta Power Ltd. is, we are advised, on the verge of litigation under the Company - Alberta Power contract. We consider it undesirable to comment on this problem, but we point out that the viability of the power plant is dependent on continuous coal production. It ought to preclude the Company from conducting operations which fluctuate extensively in production unless careful stockpiling is done. The community's interest is also opposed to anything but a stable operation. These interests would be best served by a solid long term contract. The Company should be permitted the opportunity to recoup its losses which have been encountered in conducting their operations in good faith and at grave cost to the shareholders, but it must recognize the fact that it must

ensure continued stability, in the province and in the community interest, if not in its own. We recommend the government obtain reasonable assurances of continuous rather than the intermittent production, even though the Company is engaged in short term sale contracts. If necessary, renewals of leases or permission to open up new mines should be made conditional upon these assurances.

We have studied the new Coal Conservation Act in the light of our experience. We are satisfied of the need for the general regulatory powers contained in that Act. We are, however, troubled by the absence of any appeal procedure. We are deeply conscious of the fact that there can be significant differences of opinion in relation to technical matters. We assume The Administrative Procedures Act applies to the Board, and we are satisfied that it should apply. That Act does not allow an appeal although The Energy Resources Conservation Board Act does. It is very difficult to establish a practicable appeal on facts. We see no difficulty in permitting an appeal to the courts on questions of law or jurisdiction. We have considered the type of appellate supervision exercised by the Federal Court of Canada. We have also considered the right of appeal to the Lieutenant Governor in Council on questions of fact, parallel to ss. 63 and 64 of The Transportation Act of Canada. Your Commissioners recommend that consideration be given to permitting an appeal to the Supreme Court of Alberta, Appellate Division, on matters of law or jurisdiction and to the Lieutenant Governor in Council, or its delegate, to review matters of fact (with the leave of the Lieutenant Governor in Council).

We find that safety conditions were unsatisfactory about the time of the October, 1972, work stoppage. It is clear that the employees may be in the best position to raise these matters. There appears to have been improvement in relations in this regard and it is not necessary to give advice to the present management, who are conscious of, and attentive to, the problem. It does appear, however, that there was dissatisfaction with mine inspection and there was no apparent easy access to the chief mine inspectorate. We recommend that the procedures in the Inspection Branch of the Energy Resources Conservation Board be reviewed to ensure that union safety committees can make reasonable requests for inspection by senior personnel and that the employees are made aware of this procedure. We also recommend that there be liaison between the Energy Resources Conservation Board and the Workers' Compensation Board to obtain the benefit of the latter's expertise in developing programs for the prevention of industrial accidents.

The Company urged the need for a system which reduced the number of governmental authorities with whom it has to deal in order to operate and open up new mines. This view is reflected to some extent in the "one window" policy reflected in The Coal Conservation Act. This is to be commended. Unfortunately, the Energy Resources Conservation Board, which is to be the single agency, does not have authority to make binding decisions on matters coming within the powers of government departments, so the applicant may still find itself dealing with a multiplicity of these. There appear to be deficiencies in The Coal Conservation Act's implementation of this concept. It does not include the Department of Lands and Forests'

procedures which remain separate and include consideration of surface restoration and reclamation. There is the overriding authority of the Minister of the Environment. There is one window but more than one teller. The Company still has to deal directly with the latter department if it is to debate its opinion. Moreover, it seems to us that environmental rules cannot be absolute and the balancing of the competing interests is a complex function which cannot be accomplished by two bodies. Environmental considerations are important; they have been neglected in the past -- but from the extreme of forbidding mining which would be the ultimate in environmental consideration to unrestricted development, there are many choices. The important factor, in our view, is that the decision maker be fully apprised of all aspects, be informed on all aspects and make a decision based on this. The choice is to give coal mining expertise to the environmentalists or to give environmental expertise and support to the Board -- we suggest the latter. We recommend that the Energy Resources Conservation Board should be the final arbiter on environmental matters, subject to proper appeals or review, and subject to their being provided with expertise on environmental matters, both through internal staff and through the Department of the Environment.

In this report, we have recommended that the Energy Resources Conservation Board be given extensive powers, and the law of this province gives it wide powers. We have already made a recommendation with regard to The Coal Conservation Act. Beyond this, your Commissioners recommend that in all matters referred to in this report that come before the Board, that there be an appeal to the Supreme Court of Alberta, Appellate Division,

on matters of law or jurisdiction and to the Lieutenant Governor in Council, or its delegate, to review matters of fact (with the leave of the Lieutenant Governor in Council).

In assessing the prospects for the future, much depends upon the skills of the Company's management. The recent changes in management appear to us to hold promise. We were impressed with the sincere desire of Mr. Fulton and Mr. Johnson, President and Mine Manager, respectively, to make a success of the operation. They are men of intelligence and ability who have appeared to instill a measure of confidence in the operation. We have, it is true, criticized the decision to close the Number 5 Mine. We are satisfied that the Company is now aware that its interests alone are not paramount and the interest of its associates, the government, the miners and the community will not again be ignored. We have suggested measures by which this might be assured and have suggested that the government have sufficient involvement to provide meaningful guidance. If the Company is unable to carry on the operation, we believe the government should be in a position to ensure that someone else does do so and, in our view, the prospects would justify that step.

Minority Report

by

Commissioner Patching

I concur with the report and recommendations as presented in the foregoing, except as indicated below:

(1) In Part VI, page 68, your Commissioners state, ". . . the short term (6 year) prospects for the Smoky River coal operation are good. . . . This prediction is based on the assumption that geological conditions underground will be no worse than those already encountered, and that the Company will be able to handle the strip operation satisfactorily."

To this I would also add the provision that the Company must be able to keep its costs down and that satisfactory markets and prices must be obtained if the operation is to be viable. These additions may appear to be truisms, but I believe they are very important to the present circumstances. The Company's coal operations are still not profitable. Costs and prices have been rising in recent years, and we expect these increases to continue, hopefully with price increases outrunning cost increases. However, the experience of several other coal producers is that price changes have lagged by some period of time behind increases in costs. The Company, having no long term contracts now, must sell its coal in the competitive world market, and therefore it must be able to keep its costs down if the operation is to be viable.

(2) In Part IX, page 114, I believe the recommendation that

reads, "Whenever the exploitation of a mineral resource is to be undertaken by a program which involves financial commitments by the state, . . . " should be changed to read, "Whenever an industrial project is to be undertaken by a program which involves financial commitments by the state, . . . " (changes are underlined). In my opinion, the principle involved should not just apply to the mineral industries.

(3) With regard to the finding and comments on the October, 1972, work stoppage in Part IX, page 128, and the recommendation following, I do not believe the information before the Commission was complete enough for it to obtain a full understanding of the circumstances. The employees were concerned about the safety conditions of the mines and were dissatisfied with the judgment of the District Mine Inspector. However, there was no evidence that they, or their representatives, had asked for an inspection by senior inspection personnel. Present regulations do not specifically provide for such an appeal but do not prevent or restrict an appeal from being made. I believe that their proper course of action, when there was concern over the safety of the working places, was to have made their concerns known promptly to the senior officials of the mine inspectorate or directly to the Energy Resources Conservation Board, rather than causing a work stoppage in the circumstances that did occur at that time.

The proposed Statutory Provision for the new Coal Mines Safety Act, now in draft form, specifically provides that where an elected or appointed representative of mine employees disputes a decision, order or direction of the regional Board representative, he shall immediately refer

the matter to the Board (Part 9, 40 (1) (b)). These provisions also require the prominent posting of a copy of the Act and Regulations (Part 9, 46 (1) (b) and (c)). I recommend the enactment of these provisions.

PART X

A C K N O W L E D G E M E N T S

Your Commissioners wish to express their thanks to the many parties who co-operated wholeheartedly either in appearing before the Commission or in supplying information. The Chief Justice of Alberta was most kind in having accommodation supplied for the Hearings in Edmonton. We particularly wish to point up and commend the invaluable work done by Commission Counsel, Mr. W. A. Stevenson, and the Executive Secretary, Mr. D. B. Harford. Liaison work was ably carried out by Mr. J. C. Richl who doubled as Clerk of the Hearings and was assisted for part of the summer by Student, Mr. C. Van Kooten. The office work was efficiently handled by Miss C. Mah, assisted at times by Mrs. T. Paisley and Ms. M. Pyper.

APPENDIX 1



PART XI:

Appendices

NOTICE OF HEARING

RE:

THE NEW TOWN OF GRANDE CACHE

The Public Inquiries Act

NOTICE is hereby given that the Commission appointed by the Lieutenant-Governor-in-Council, pursuant to The Public Inquiries Act, to investigate the history and circumstances of the establishment and development of the New Town of Grande Cache will hold public hearings, opening as follows:

at GRANDE CACHE, in the Court Room,
Provincial Building, commencing
Tuesday, May 29th, at 9:30 a.m.

at EDMONTON, in the Law Courts,
commencing Monday,
June 11th, at 9:30 a.m.

The matters to be investigated are to:

1. Ascertain any undertaking, commitment, or representation given by the previous or present government administrations to any company, group, association or person which could involve a continuing responsibility for public funds upon the Alberta Government;
2. Determine the extent of the representations or undertakings made by McIntyre Porcupine Mines Ltd. to any employee or group of employees as to long term employment security or any other representations or undertakings made by the company, either to employees, to the citizens of the community, or to the Government;
3. Determine the economic viability of the operation of McIntyre Porcupine Mines Ltd. and of the community itself, and make recommendations as to steps which could be taken to strengthen such economic viability—which should include a review of the pricing provisions of contracts for the sale of coal, the cost of production and a review of the reports supporting management's decision to make major changes in policies affecting production;
4. Review the actions taken to date by both the previous and present government administrations in providing support and public funds for this community and to recommend to the Government alternative courses for future government policy and programs for this community.

All persons or organizations desirous of making submissions or representations are urged to be prepared by the above dates in order they, their agents or counsel, may be ready to proceed when called upon. Every effort will be made to meet the convenience of persons interested.

All such persons and organizations are requested to communicate with Mr. W. A. Stevenson, Commission Counsel, at Ste. 202, 11111-87 Avenue, Edmonton, Alberta, or telephone 439-3991 as soon as possible and advise him of the general nature of the evidence to be submitted.

DATED this 16th day of April, 1973.

N. R. CRUMP,
Chief Commissioner
T. M. PATCHING,
D. GRAHAM,
Commissioners

APPENDIX 1

NEWSPAPERS IN WHICH "NOTICE OF HEARING" APPEARED
(Week of April 25, 1973)

Athabasca Echo	Medicine Hat News
Banff Crag & Canyon	Olds Gazette
Barrhead Leader	Peace River Record Gazette
Bonnyville Nouvelle	Pincher Creek Echo
Bow Island 40 Mile Commentator	Ponoka County News
Brooks Bulletin	Raymond Review
Calgary Albertan	Red Deer Advocate
Calgary Herald	Red Deer County News
Calgary North Hill News	Rimbey Record
Camrose Canadian	Rocky Mountain House Mountaineer
Claresholm Footnotes & News	St. Albert Gazette
Coaldale Sunny South News	St. Paul Journal
Drayton Valley Western Review	Sedgewick Community Press
Drumheller Big County News	Stettler Independent
Drumheller Mail	Stony Plain Reporter
Edmonton Journal	Strathcona County News
Edson Leader	Strathmore Standard
Fairview Post	Taber Times
Fort Saskatchewan Record	Three Hills Capital
Grande Cache Mountaineer	Tofield Mercury
Grande Prairie Daily Herald-Tribune	Two Hills County Star
High Prairie South Peace News	Vermilion Standard
High River Times	Viking News
Innisfail Province	Vulcan Advocate
Lacombe Globe	Western Catholic Reporter Edmonton
Lamont County Star	Westlock News
Leduc Representative	Wetaskiwin News Advertiser
Lethbridge Herald	Wetaskiwin Times
Whitecourt Star	

APPENDIX 1

LIST OF WITNESSES, DATES OF APPEARANCE AND EXHIBITS SUBMITTED

Summer Hearings, 1973

1. W. Donald Gillies

June 12, representing the Board of Administrators, Town of Grande Cache. Exhibits 4, 5 and 6, a written submission, "The Grande Cache Community Information Study" and "The Department of Highways Route Study".

2. Grahame K. Allen

June 12, representing the Peace River Regional Planning Commission. Exhibit 7, a written submission on the highway link between Grande Prairie and Grande Cache along with three appending documents.

3. George Williamson

June 12, representing the Alberta Teachers Association, Grande Cache Sub Local. Submitted Exhibit 8, a written brief.

4. Kelly Joachim

June 13, representing the Native Area Development Committee.

5. Carmen Loberg

June 13, representing the Native Area Development Committee. Submitted Exhibit 9, a written brief, along with five appending documents.

6. F. Stewart Cooke

June 13, representing the United Steelworkers of America, Local 7621 and District 6. Submitted Exhibit 10, a written brief.

7. Phillip R. Oakes

June 13, representing the United Steelworkers of America, Local 7621 and District 6.

8. Gerald N. Farmer

June 13 and 14, representing the United Steelworkers of America, Local 7621 and District 6.

9. Arthur Bradbury

June 14, representing the United Steelworkers of America, Local 7621 and District 6. Submitted Exhibit 11, McIntyre Porcupine inter-office correspondence.

10. Barry Wilson

June 14, representing the United Steelworkers of America, Local 7621 and District 6.

11. Neil Royal

June 14, representing the United Steelworkers of America, Local 7621 and District 6.

12. Al Neary

June 14, representing the United Steelworkers of America, Local 7621 and District 6.

13. George F. Hurst

June 14, representing the United Steelworkers of America, Local 7621 and District 6.

14. David W. Pickles

June 14, representing the United Steelworkers of America, Local 7621 and District 6.

15. Deane R. Toews

June 14, representing the Grande Prairie Chamber of Commerce. Submitted Exhibit 12, a written brief.

16. Margaret Miller

June 14, representing the Alberta Youth Hostels Council. Submitted Exhibit 13, a written brief.

17. Arthur Bradbury

June 15, representing the United Steelworkers of America, Local 7621 and District 6.

18. Alex Didow

June 15, representing the Grande Cache Chamber of Commerce. Submitted Exhibit 14, a written brief.

19. Henry Resta

June 15, representing the Grande Cache Chamber of Commerce.

20. Lloyd O. Bossert

June 15, representing the Grande Cache Chamber of Commerce.

21. Dennis H. O'Donnell

June 15, representing the Grande Cache Chamber of Commerce. Submitted Exhibit 15, a written brief on tourism.

22. Leonard L. Gurel

June 20, representing the Department of Municipal Affairs. Submitted Exhibits 16, 17 and 18, being the Department of Municipal Affairs Study on the Townsite, Minutes of Meetings between McIntyre Porcupine, Associated Engineering and Mr. Gurel and Grande Cache Financial Statements for 1969-1972.

23. Alex Woronuk

June 20, developer - hotel and shopping centre mall in Grande Cache.

24. Roy R. Erickson

June 20, representing the Provincial Planning Branch, Department of Municipal Affairs.

25. Frank J. Holubowich

June 20 and 21, representing the Department of Mines and Minerals. Submitted Exhibits 19, 19A, 20 and 20A, being maps of the Smoky River coal area indicating McIntyre Porcupine coal leases and maps of the Smoky River coal area indicating coal, gas and petroleum leases not held by McIntyre Porcupine.

26. Robert H. Cronkhite

June 21, representing the Department of Highways and Transport.

27. G. Douglas Menzies

June 21, representing the Department of Public Works.

28. Jack Lee

June 22, former miner with McIntyre Porcupine Mines, Grande Cache.
Submitted Exhibit 21, Employment Agreement of 1969.

29. William E. Chomlak

June 22, former miner with McIntyre Porcupine Mines, Grande Cache.

30. R. Carl Berglund

June 22, representing the Alberta Hospital Services Commission.

31. Douglas C. McColl

June 22, representing the Alberta Housing Corporation.

32. Keith Provost

June 25, representing the Canadian Utilities Ltd. (Alberta Power).
Submitted Exhibit 22, a written brief.

33. Dr. V. A. Wood

June 25, representing the Department of Lands and Forests.

34. James A. Barnes

June 26, representing Alberta Government Telephones.

35. Albert Bredo

June 26, representing the Department of Education.

36. F. Stewart Cooke

June 26 and 27, representing the United Steelworkers of America, Local 7621 and District 6. Submitted Exhibit 23, a written brief.

37. Graham L. Dixon

June 27, representing the Federal Department of Manpower and Immigration. Submitted Exhibit 24, a written report.

38. Donald W. Strang

June 27, representing the Department of Health and Social Development.

39. Eugene A. Mitchell

June 27, representing the Alberta Federation of Labour. Submitted Exhibit 25, a written brief.

Fall Hearings, 1973

40. Bert Bloemhof

September 18, representing the Alberta Wilderness Association. Exhibit 26, a written submission plus one appending document.

41. Tom T. Grothen

September 18, representing the Department of Manpower and Labour. Submitted Exhibit 28, a letter to N. R. Crump.

42. James L. Engel

September 18, representing Travel Alberta. Submitted Exhibit 29, "The Grande Cache Tourism Study - Interim Report".

43. Ken Broadfoot

September 18, representing the Department of Industry and Commerce. Submitted Exhibit 30, a letter and brief entitled "Community Economic Development Program".

44. Randolph H. McKinnon

September 24, testifying as former Cabinet Minister and Chairman of the Grande Cache Co-ordinating Committee.

45. John M. Currie

September 24, testifying as former Secretary, Alberta Resources Railway Corporation. Submitted Exhibit 32, correspondence and documents regarding the A.R.R. - C.N.R. Agreements.

46. James O. Pitts

September 24, representing Canadian National Railways.

47. Neil J. Duncan

September 24 and 25, representing the Energy Resources Conservation Board. Submitted Exhibits 33 and 34, two letters referring to the safety issue at the minesite.

48. Charles E. Richardson

September 25 and 26, testifying as former President, McIntyre Porcupine Coal Mines Ltd. Exhibit 35, a written submission by the Company.

49. E. Phillips Johnson

September 26, representing McIntyre Porcupine Coal Mines Ltd.

50. John K. Godin

September 26, testifying as former President, McIntyre Porcupine Mines Ltd.

51. John B. Anderson

September 26, representing McIntyre Porcupine Mines Ltd.

52. Robert B. Fulton

September 27, representing McIntyre Porcupine Mines Ltd.

53. Dennis McKelvie

September 28, representing McIntyre Porcupine Coal Mines Ltd.
Submitted Exhibit 37, a list of reserves at McIntyre Coal Properties.

54. Leslie G. Price

September 28, testifying as a former employee holding several executive positions at McIntyre Porcupine Coal Mines Ltd.

55. Senator Ernest C. Manning

October 1, testifying as former Premier of the Province of Alberta.

56. Anders O. Aalborg

October 1, testifying as former Provincial Treasurer, Province of Alberta.

57. A. Russell Patrick

October 1, testifying as former Minister of Mines and Minerals and Minister of Industry and Development, Province of Alberta.

58. John H. Ashburn

October 2, representing the Energy Resources Conservation Board.

59. Dr. Eric J. Hanson

October 2, appearing as an expert witness to the Grande Cache Commission. Submitted Exhibits 38 and 39, a curriculum vitae and a report to the Commission.

60. John T. Boyd

October 2 and 3, appearing as an expert witness to the Grande Cache Commission. Submitted Exhibits 40 and 41, one report each on the Preparation Plant and the Strip Coal Reserves at McIntyre Porcupine Smoky River Properties.

61. Dr. Kenneth Barron

October 3, representing the Department of Energy, Mines and Resources, Government of Canada. Submitted Exhibit 42, a paper on Roof Problems in Mines Number 2 and Number 5 and a Summary of Studies on Thick and Inclined Seam Coal Mining.

62. Kenneth Wardell

October 3, 4 and 5, appearing as an expert witness to the Grande Cache Commission. Submitted Exhibit 43, a Report on Underground Mining in the Smoky River Area.

63 and 64. David C. H. Stanley and Howard J. Wiggett

October 5, appearing as expert witnesses to the Grande Cache Commission. Submitted Exhibit 44, a list of documents prepared by Wood Gundy Ltd.

APPENDIX 1

L I S T O F E X H I B I T S

Summer Hearings, 1973

1. Certified Copy of Order-in-Council Number 290/73; February 22, 1973.
2. Document announcing Appointment of the Commission; March 14, 1973.
3. Notice of Hearing and Newspaper Schedule.
4. Grande Cache Board of Administrators Submission to the Grande Cache Commission; June 12, 1973.
5. Grande Cache Community Information Study; March 22, 1973.
6. Grande Cache - Grande Prairie Highway Route Study; November, 1972.
7. The Possibility of a Highway Link between Grande Prairie and Grande Cache by the Peace River Planning Commission; June, 1973.

Three appendices included with the submission:

- (a) Central Places in the Peace River Region of Alberta; November, 1971.
 - (b) People of the Peace: Their Goals and Objectives; August, 1972.
 - (c) An Economic Base Study of the Peace River Region of Alberta; January, 1973.
8. Submission to the Grande Cache Inquiry prepared and presented by the Grande Cache Sub Local of the Alberta Teachers Association; May 28, 1973.
 9. Submission to the Public Inquiry by the Native Area Development Committee; June, 1973.

Five appendix items included with the submission:

- (a) Native Area Development Committee, Appendix 1 (Part A); Land Tenure for the Original Settlers in the Grande Cache Area; undated,
- (b) Native Area Development Committee, Appendix 1 (Part B); Appendices to Land Tenure for the Original Settlers in the Grande Cache Area; undated,

- (c) Native Development and the Private Sector, Appendix 2, by R. B. Morrison and I. N. Glick; circa 1971,
 - (d) Native Area Development Committee, Appendix 3; Grande Cache Native Area Committee Hospitality Services Report, Muskeg and Grande Cache Lake; May, 1973,
 - (e) Native Area Development Committee, Appendix 4; Economic Opportunities for Native People in the Grande Cache Area by E. G. Capling; June 15, 1971.
- 10. Submission of Local 7621 of the United Steelworkers of America and District 6 to the Public Inquiry; June, 1973.
 - 11. McIntyre Porcupine Inter-Office Correspondence entitled "Management Comments to Underground Personnel"; August 26, 1970.
 - 12. Grande Prairie Chamber of Commerce Submission to Crump Hearing - Grande Cache; May 29, 1973.
 - 13. Submission From: The Alberta Youth Hostels Council;
To: The Crump Grande Cache Commission; June, 1973.
 - 14. Grande Cache Chamber of Commerce Submission to the Crump Commission; June 12, 1973.
 - 15. Tourism Development Proposal by the Grande Cache Chamber of Commerce prepared by D. H. O'Donnell; June, 1973.
 - 16. Grande Cache Townsite; A Report prepared by the Provincial Planning Office, Department of Municipal Affairs; August, 1966.
 - 17. Minutes of Meetings held between October 19, 1968 and January 8, 1969, on New Town of Grande Cache. Attending: McIntyre Porcupine, Associated Engineering, Mr. L. Gurel.
 - 18. Town of Grande Cache Financial Statements for the years 1969, 1970, 1971, 1972.
 - 19. Map of Smoky River Coal Area (north-west) indicating McIntyre Porcupine Coal Leases; June, 1973.

Note: This map is also marked as Department of Mines and Minerals Exhibit 1, Part B.
 - 19A. Map of Smoky River Coal Area (south-east) indicating McIntyre Porcupine Coal Leases; June, 1973.

Note: This map is also marked as Department of Mines and Minerals Exhibit 1, Part A.

20. Map of Smoky River Coal Area (south-east) indicating the coal, petroleum and natural gas leases of firms other than McIntyre Porcupine Mines Ltd.; June, 1973.

Note: This map is also marked as Department of Mines and Minerals Exhibit 2, Part A.

- 20A. Map of Smoky River Coal Area (north-west) indicating the coal, petroleum and natural gas leases of firms other than McIntyre Porcupine Mines Ltd.; June, 1973.

Note: This map is also marked as a Department of Mines and Minerals Exhibit 2, Part B.

21. Employment Agreement between McIntyre Porcupine Mines Ltd. and Jack Lee; August 15, 1969.
22. Canadian Utilities Ltd. Submission to the Grande Cache Commission; June, 1973.
23. Submission of Local 7621 of the United Steelworkers of America and District 6 to the Public Inquiry; June, 1973.
24. Report by Federal Department of Manpower and Immigration to N. R. Crump; June, 1973.
25. Submission of the Alberta Federation of Labour to the Grande Cache Commission; June, 1973.

Fall Hearings, 1973

26. Alberta Wilderness Association Brief presented to the Grande Cache Commission re The Future of the Grande Cache Community; September 17, 1973.

Plus one bibliography item: a booklet entitled "Willmore Wilderness Park," 1973.

27. Alberta Resources Railway Booklet submitted by S. Cooke of the United Steelworkers of America, by mail.
28. Letter by T. T. Grothen, Department of Manpower and Labour, Government of Alberta, to N. R. Crump; August 24, 1973.
29. Grande Cache Tourism Study - Interim Report prepared by Hospitality Systems Research Ltd., submitted by witness J. L. Engel; September 1, 1973.
30. Letter to D. B. Harford from W. J. Wenzel and brief entitled "Community Economic Development Program" submitted by witness K. Broadfoot, Department of Industry and Commerce, Government of Alberta; September 11, 1973.

31. Three letters: to E. P. Johnson from D. B. Harford dated July 24, 1973; to N. R. Crump from R. B. Fulton dated July 18, 1973; to N. R. Crump from E. P. Johnson dated July 14, 1973; regarding J. T. Boyd's employment by McIntyre Porcupine.
32. Correspondence and documents regarding the A.R.R. - C.N.R. Agreements submitted by witness J. M. Currie, Assistant Deputy Provincial Treasurer and former Secretary, Alberta Resources Railway Corporation.
33. Letter from J. Kubin of the Energy Resources Conservation Board to W. Murray, Mine Manager, McIntyre Porcupine Mines Ltd., dated October 23, 1972, regarding safety conditions in Mines Number 2 and Number 5. Submitted by witness N. J. Duncan, Energy Resources Conservation Board.
34. Letter from J. Kubin to W. Fowers dated October 31, 1972, regarding examination of Mines Number 2 and Number 5 submitted by witness N. J. Duncan, Energy Resources Conservation Board.
35. McIntyre Porcupine Mines Ltd. Brief for Submission to the Grande Cache Commission, September, 1973, submitted by witness C. E. Richardson.
36. A two page document making up part of a memorandum from the Commission to McIntyre Porcupine Mines Ltd.
37. A handwritten list of reserves at McIntyre Coal Properties submitted by witness D. McKelvie, Chief Geologist of McIntyre Porcupine Mines Ltd.
38. Curriculum Vitae of Dr. E. J. Hanson, Expert Witness, submitted by Dr. E. J. Hanson.
39. Grande Cache Commission Report by Dr. E. J. Hanson, September, 1973, submitted by witness Dr. E. J. Hanson.
40. Dependable Annual Capacity Coal Handling and Preparation Facilities, Smoky River Mine, McIntyre Porcupine Ltd., Grande Cache, Alberta, by J. T. Boyd Company Mining Engineers, Pittsburgh, Pennsylvania. September 17, 1973, submitted by J. T. Boyd, Expert Witness.
41. Strip Coal Reserves, Smoky River Properties, Grande Cache, Alberta, by J. T. Boyd Company. September, 1973, submitted by witness J. T. Boyd.
42. Roof Problems in Mines Number 2 and Number 5 at McIntyre Coal Mines Ltd., Grande Cache, Alberta, and A Summary of MRC Studies of Thick and Inclined Seam Coal Mining Methods dated September, 1973, by Dr. K. Barron. Submitted by witness Dr. K. Barron of the Department of Energy, Mines and Resources, Government of Canada.
43. Report on Underground Coal Mining in the Smoky River Area by K. Wardell, Expert Witness. September 28, 1973, submitted by K. Wardell.

44. List of Exhibits prepared by Wood Gundy Ltd., submitted by
D. C. H. Stanley, Expert Witness.

Appendix 2

1209 Prospect Avenue
Calgary, Alberta
March 20th, 1973

C
O
P
Y

Hon. Dr. A. E. Hohol
Minister of Manpower & Labour
423 - Legislative Building
Edmonton, Alberta

Dear Mr. Minister:

Under terms of Order-in-Council 290-73 dated February 22nd, 1973, a Commission was appointed to look into the affairs of New Town Grand Cache and its primary industry MacIntyre-Porcupine Coal Mines. Section 4 specifically directed that we submit an interim report on the industry's application to open a strip operation to be known as No. 9 Mine.

I find the Energy Board will hold Hearings on this application at Grand Prairie on April 3rd. I discussed this conflict with Dr. Berkowitz on March 7th, and we will receive reports, transcripts, etc., from the Board and the Company. I also discussed the conflict with Mr. Yurko on the phone March 9th after the Ministerial Party returned from Grand Cache.

Our Commission visited the Community and the Mine property on the 14th and 15th. We, of course, lack details at this time but we did view the site of No. 9 Mine and had some discussions with the Company Officers. It would appear the operation of this Mine is necessary if the industry is to continue and that a decision must be reached by April 15th if contracts are to be let this year. The reserve appears adequate and I gather from discussion no problem exists on rehabilitation of the area afterward since it is presently covered only by scrub timber.

The decision of course, rests with the Energy Board but my colleagues and I thought you should be advised of our opinion at this stage of our investigation.

Very truly yours,



N. R. Crump
For the Commission

cc: Hon. Wm. J. Yurko

Dr. G. W. Govier

APPENDIX 3

L I S T
O F
C O U N S E L

W. A. Stevenson	Commission Counsel
D. O. Sabey, Q.C. and J. G. Martland	For McIntyre Porcupine Mines Limited
B. V. Massie, Q.C.	For Canadian Utilities Limited
L. Ingle	For United Steelworkers of America
C. Irwin	For Canadian National Railways

Appendix 4: Estimates of Coal Reserves
From Evidence of Company Geologist

<u>Mine Area</u>	<u>Seams</u>	<u>In Place (Measured)</u>	<u>Tons (Millions of Long Tons)</u>		<u>Method</u>	<u>Prep. Plant Recovery %</u>
			<u>Recoverable</u>	<u>Developed (Economically Recoverable)</u>		
1	2,3,4,5,7,9	46.82	7.8		Underground	
2	4,10,11 4 11	23.25	12.3	2.40 1.40	Underground Underground	50%
3	4,10	24.55	13.0	--	Underground	
5	4,10,11	8.87	3.55	?	Underground	
7 (Campbell Flats & Fox Creek)	3,4,6,7,8,9 3,4	49.41	17.19		Undg. & Strip?	
8	4,10 4	19.66	12.79	1.85	Strip & Undg.?	
9	4,10,11	181.66	116.76	8.50	Strip & Undg.?	
14 (Grande Mtn.)	3,4,6,7,8,10 (4,10)	44.66	23.43 16.00)		Strip & Undg.?	
20 (Copton Excol)	4,5,6,7	159.70	120.95		?	

Appendix 5

<u>Mine</u>	<u>Seams</u>	<u>Mineable Thickness</u>	<u>Percentage Recovery by Area</u>	<u>Recoverable Reserves Million LRT</u>	<u>Prep. Plant Recovery %</u>	<u>Comments</u>
2	4	10		2.34		Depillaring
2A	11	6.5	75%	1.40		Mined in
	10	8.0	75%	1.70		Descending order
	4	10.0	75%	2.16		
Reiff Terrace	11	6.5	75%	0.90		Descending order
	10	8.0		1.23		Descending order
	4	10.0	75%	1.38	50?	
5	10	6.5	75%	0.54		Descending order
	11	8.0	75%	0.65	50?	Descending order
Total				12.30		

Appendix 6

Mine No.
Type of Operation
Recoverable Million LRT
Quality
Strip Ratio (Cu yds waste per LRT Coal)
Prep. Plant Recovery %

PROVEN

8	Truck/shovel	1.51	Coking	3.12	60-65
9*	Truck/shovel	9.64*	Coking	7.84*	
	Subtotal	11.15		7.52	

PARTIALLY PROVEN

7	Truck/shovel	.38	Coking	5.00	
14	Dragline	12.34	Coking	13.84	
	Subtotal	12.72		13.57	
14	Auger	1.0 to 2.0	Coking	---	
	Total	24 to 25		10.81	

NOTE 1.
Alternate A #9

Dragline, Truck/shovel	19.96	Coking	11.32	
		- or -		

Alternate B #9

Dragline	76.31	Coking	15.47	
----------	-------	--------	-------	--

NOTE 2.
#20

Small pits	13.45	Non-coking	6.42	
Big pits	97.12	Non-coking	10.74	

Appendix 7

McIntyre Porcupine Mines Limited
Coal Division
BALANCE SHEET
(\$000's omitted)

<u>ASSETS</u>	April 30 <u>1973</u>	December 31 <u>1972</u>
CURRENT		
Accounts receivable	\$ 1,191	\$ 953
Clean coal inventory	<u>1,943</u>	<u>3,765</u>
	<u>3,134</u>	<u>4,718</u>
HOUSING AND TOWNSITE	<u>2,589</u>	<u>2,456</u>
PROPERTIES AND PLANT		
Mining assets	38,022	37,697
Terminal assets	<u>8,974</u>	<u>8,974</u>
	<u>46,996</u>	<u>46,671</u>
Less accumulated depreciation	<u>6,762</u>	<u>5,533</u>
	<u>40,234</u>	<u>41,138</u>
Deferred Mine Development less amortization	<u>25,716</u>	<u>25,533</u>
	<u>65,950</u>	<u>66,671</u>
OTHER ASSETS		
Mine supplies	3,429	3,424
Long-term receivable	<u>1,708</u>	<u>1,463</u>
	<u>5,137</u>	<u>4,887</u>
	<u>\$76,810</u>	<u>\$78,732</u>
 <u>LIABILITIES</u>		
CURRENT		
Inventory financing	\$ 1,100	\$ 1,500
Accounts payable	<u>3,703</u>	<u>5,816</u>
	<u>4,803</u>	<u>7,316</u>
OTHER DEBT		
5-1/2% Notes payable	2,875	2,875
Secured debenture	3,000	-
Bank loan due December 31, 1976	<u>64,000</u>	<u>64,000</u>
	<u>69,875</u>	<u>66,875</u>
McINTYRE EQUITY		
Funds invested	24,484	24,650
losses		
1971	(7,176)	(7,176)
1972	(12,933)	(12,933)
1973	<u>(2,243)</u>	<u>-</u>
	<u>2,132</u>	<u>4,541</u>
	<u>\$76,810</u>	<u>\$78,732</u>

Statement of Operations
to April 30, 1973

	Preproduction		Operating		Total Operating
	1970/71	1971 (April - Dec.)	1972	1973 (Jan. - April)	
Clean Coal Production - long tons	718,370	880,103	1,565,720	498,930	2,944,753
Raw Coal Sales - " "	271,255				
Revenue (\$000's)	\$13,762	\$15,656	\$28,974	\$ 9,649	\$54,279
Freight & Terminal	4,017	3,804	8,170	2,463	14,437
Mine Operating Cost	15,943	13,306	21,952	6,490	41,748
Interest (note 1)	-	2,505	3,673	1,335	7,513
Depreciation (note 1)	-	2,557	3,307	1,230	7,094
Amortization (note 1)	-	660	1,196	374	2,230
Extraordinary Write-off (note 2)	-	-	3,609	-	3,609
Total expenses	19,960	22,832	41,907	11,892	76,631
(Loss) earnings	\$ (6,198)	\$ (7,176)	\$ (12,933)	\$ (2,243)	\$ (22,352)

note (1) During the preproduction period no depreciation or amortization were provided, and interest was capitalized.

(\$000's)

(2) Re No. 5 Mine closing:

Equipment written-off	\$ 458
Development Costs written off	2,525
Provision for closing down expenses	626
	\$3,609

Appendix 7

MINING ASSETS
(\\$000's)

<u>UNDERGROUND</u>	<u>Dec. 1972</u> \$	<u>April 1973</u> \$
Conveyor & belt systems including electrical	3,466	3,466
Pumps, pipes, fans & tubings	497	498
Longwall equipment (Dowty)	1,228	1,228
Continuous miners	2,611	2,611
Mobile belt & loader system	674	674
Manride, supply vehicles, roof bolters, shuttle-cars, etc.	3,035	3,055
Transformers, cables & electrical	1,603	1,603
	<u>13,114</u>	<u>13,135</u>
 <u>SURFACE</u>		
Land improvements	1,436	1,436
Portals & ventilation	868	868
Conveyors	1,877	1,877
Workshops, garages, warehouse, minedry, office & laboratory	2,865	2,978
Electrical, oil, water & heating services	1,900	1,900
Surface mobile	610	610
Staff houses & Recreation Centre	884	884
	<u>10,440</u>	<u>10,553</u>
 <u>PREPARATION PLANT</u>		
Preparation plant - original	5,209	5,209
- modifications	1,970	2,161
Conveyors, bypass, breaker, blender surge bin, etc.	2,035	2,035
Tailings & middlings - conveyors	727	727
- disposal	957	957
Dryer, clean storage & loadout, magnetite store	3,245	3,245
	<u>14,143</u>	<u>14,334</u>
 <u>TOTAL ASSETS</u>	37,697	38,022
 <u>ACCUMULATED DEPRECIATION</u>	(5,033)	(6,167)
 <u>NET ASSETS</u>	32,664	31,855
	<u><u> </u></u>	<u><u> </u></u>

Appendix 7

TERMINAL ASSETS

April 30, 1973

Ref.

4001	Stacker/Reclaimer	\$ 938,881.81
4002	Dumper/Indexer	656,138.51
4003	Minor Foundations	86,954.79
4004	Major Foundations	697,306.87
4005	Shiploader	1,155,560.23
4006	Dock	780,715.53
4007	Conveyors	1,076,600.82
4008	Buildings	89,234.31
4009	Electrical	622,249.58
4010	Trackwork	93,692.06
4011	Miscellaneous	90,940.49
4012	Sampling Equipment	193,319.80
4013	Pollution Control	740,723.66
4000	Design Engineering	229,520.12
--	Other Engineering	398,189.76
--	Site Roads & Fences	14,522.62
--	Loop Track	50,886.70
--	Shared Facilities	310,055.10
--	Prior Expenses	282,341.55
--	Equipment Modifications	253,506.47
--	B.C. Sales Tax	66,981.72
	Construction Costs - Neptune Coal Terminals	\$8,828,322.50
	Capitalized Interest	65,456.96
	Engineering studies - Ridley Island	51,854.42
	Coal screening equipment	28,287.90
	Total Terminal Assets	\$8,973,921.78
	<u>less</u> Accumulated depreciation	595,286.00
	Book value	\$8,378,635.78



GRANDE CACHE - GRANDE PRAIRIE

Highway Routes

Appendix 7

Working Paper Adjustments
(\\$000's)

	<u>Book Values Apr.30/73</u>		<u>Losses to date</u>	<u>McIntyre Investment 1966 - 1973</u>	<u>Total Investment to date</u>
Working Capital	3,468	Cash loss	10,045	13,513	13,513
Housing & Townsite	2,589	w/o Deprn.	458) 6,499)	2,589 38,812	11,858 38,812
Mining Assets	31,855				
Terminal Assets	8,379	Deprn. w/o	595 2,525)	8,974	8,974
Deferred Mine Development	25,716	Amort.	2,230)	30,471 (1) 524	30,995
	72,007		22,352	94,359	104,152

(1) pre-1966 lease rentals

(2) CMHC Mortgage Funds

DATE DUE

~~APR 6 78~~

~~NOV 1 78~~

~~MAR 30 79~~

~~JUL 25 79~~

MAR 11 80

~~AUG 13 1982~~

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